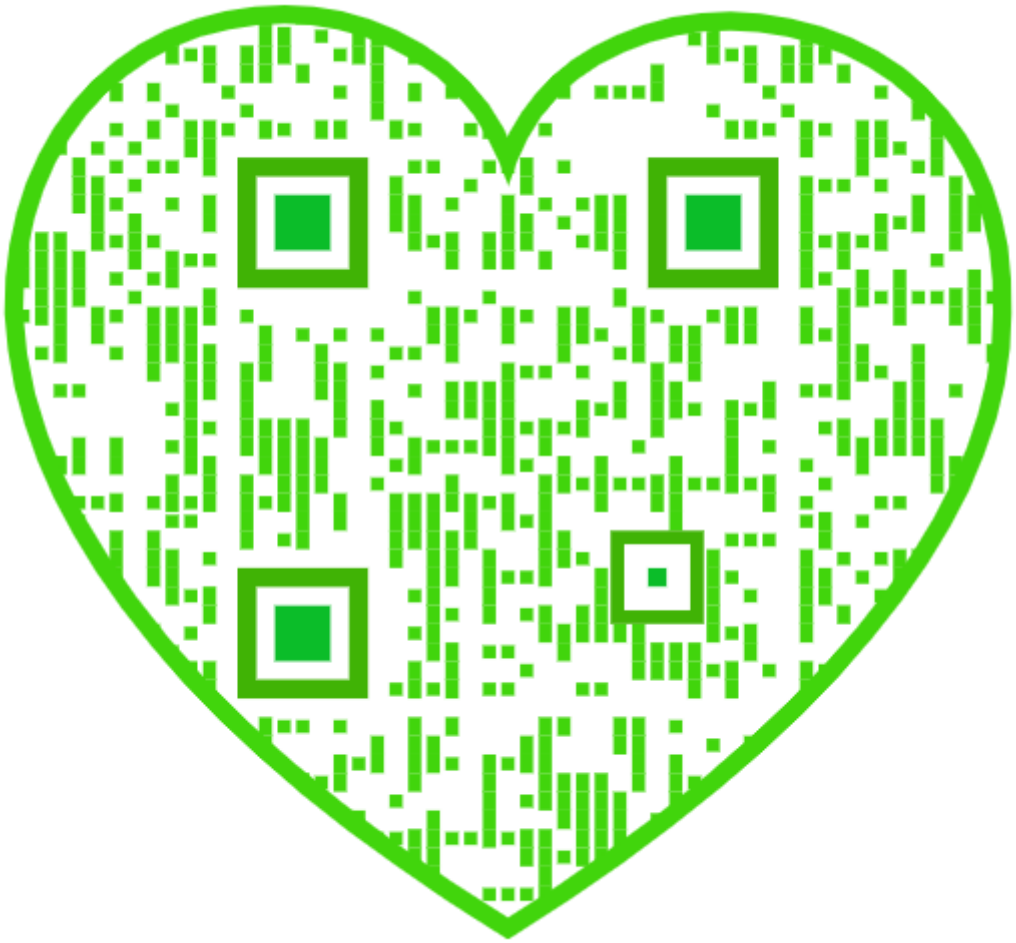

TEA

AND OTHER

PLANTING INDUSTRIES

IN CEYLON,

IN 1885.

A GOOD FIELD FOR INVESTMENT.

Colombo:

A. M. & J. FERGUSON.

LONDON:

TRÜBNER & Co. | JOHN HADDON & Co.
GEO. STREET & Co. | W. B. WHITTINGHAM & Co.

1885.

Price in Ceylon R1; in London 2s.

Ferguson, John.

CEYLON & HER PLANTING ENTERPRIZE:

IN

TEA, CACAO, CARDAMOMS, CINCHONA, COCONUT, AND ARECA PALMS.

63080

A FIELD FOR THE INVESTMENT OF BRITISH CAPITAL AND ENERGY.

GIVING THE OPINIONS OF A NUMBER OF PLANTERS OF DIVERSIFIED EXPERIENCE IN THE COLONY;

ALSO

ESTIMATES OF THE OUTLAY ON, AND RETURN FROM, A VARIETY OF PRODUCTS.

Colombo:
A. M. & J. FERGUSON.
1885.

PRINTED AT THE "CEYLON OBSERVER" PRESS.

PREFACE.

BUT few words of explanation are needed in issuing this little compilation from the press. Its object is not to treat exhaustively any of the topics discussed, but to lay such a view before those who are unacquainted with the past history, present condition, and future prospects of the planting enterprize in Ceylon, as shall lead them to make further enquiries, obtain publications with fuller information, and if so inclined, visit the Colony to see and learn for themselves. This little work is pre-eminently one to place in the hands of young men in the mother country with capital and energy to back them, on the look-out for a field in which to obtain the best training in tropical agriculture.

At first it was only intended to publish the series of letters specially written by several Ceylon planters of more or less experience which will be found between pages 1 and 67; but arising out of those letters, discussions took place which it was thought best to notice. It was also considered wise to add in an appendix (pages 68 to 76) a selection of estimates of needful outlay and probable return in connection with the principal products referred to.

It was finally thought desirable, to include by way of introduction, a letter written by the Compiler for the

London *Times*, and the report of an interview with a representative of the *Pall Mall Gazette*, in September 1884, as the best means of affording a brief résumé (pages i to xiii) of the recent history of the Planting Enterprize of Ceylon.

If these pages serve to interest even a few young men of the right sort, in the industries of Ceylon, it will amply repay any trouble it may have cost

THE COMPILER.

COLOMBO, 21ST MARCH, 1884.

CONTENTS.

PAGE.

Ceylon and its Planting Industries (Letter to London "Times")... ... ... i to v

The Prospects of England's Chief Tropical Colony ("Pall Mall Gazette" Interview) ... ... vi to xiii

"CEYLON AS A FIELD FOR THE INVESTMENT OF CAPITAL AND ENERGY:—"

CHAPTER I.—The Period of Planting Depression in Ceylon drawing to an End—Over-speculation in Tea Deprecated—Salubrity of Ceylon Tea Districts—Prospects before Investors: two Courses—Forest-land *vs.* Old Estates—Capital Required—Probable Outlay and Return—Under Judicious Investment, 20 per cent on Capital... 4

CHAPTER II.—Twenty Years' Experience of Ceylon—New and Old Products—Sindbad's "Man of the Mountain"—Worse Places than Ceylon 8

CHAPTER III.—Tea Cultivation: Rules for the Guidance of a Young Tea Planter 12

A Word of Warning from "Moderation".. ... 18

Results of the Mariawatte Estate up to end of 1884 19

Tea and Rainfall in the Haputale, Matale, and Badulla Districts 21-23-25

Tea at high and medium elevations; Coffee which still Yields Paying Crops—Cinchona Bark Keeping up Old Coffee 26

Assam-hybrid Tea 6,000 feet above Sea-level Yielding 500 lb. and Upwards, per acre on Abbotsford 30

Yield of Tea at a High Altitude in Ceylon ... 34

CHAPTER IV.—Ceylon and the Position and Prospects of its Planting Enterprize 40

CHAPTER V.—Boyhood the Happiest Time of Life—Ceylon in Old Days: its Conquest by the British—The Road to Kandy: How it was Made and its Effect on the Revenue of the Island—The Rise and Fall of the Coffee Industry—The Ruin Caused by Leaf-disease not Confined to the European Community—New Products

CONTENTS.

PAGE.

—The New King, Tea: its Ubiquity of Growth—Dangers of Hurry—Advantages Enjoyed by Ceylon Tea Planters—Likelihood of a Fall in Prices—Cost of Production—The best Tea Soil—Choice of Plants—Hybrids—New and Old Land—Elevation and Rainfall—Cost of Opening a Tea Estate of 100 acres—Profits—A Healthy Climate—The Ceylon Planters—District Associations 59

CHAPTER VI.—How a Coffee Plantation has Paid its Way in a Poor Part of a High District, in Ceylon, in spite of Leaf-disease, Poor Prices and General Depression... 66

NEW AND OLD PRODUCTS IN CEYLON: Estimates of Cost and Yield from Plantations of Tea, Cacao, Cardamoms, Cinchona, Cocoanut Palms, Areca Palms, &c. ... 68

Currency and further information 77

Advertisements ... ... *At end*

INDEX.

	PAGE.
Abbotsford Tea Plantation, Yield of, &c. ...	18, 34, 38
Advertisements	... 79
Arecanut Cultivation	... 76
Do. Estimates of Outlay and Yield ...	76-76*a*
Badulla District, Rainfall and Prospects of Tea in	... 25
Bug on Coffee	... 9
Cacao Cultivation	iv, vi
Do. Estimate of Outlay and Yield ...	... 69
Do. Statistics of	... vi
Capital Introduced into Ceylon	... 1
Do. Required for Tea	7, 42, 51, 65
Cardamom Cultivation	... 72
Do. Estimate of Outlay and Yield ...	... 71
"Ceylon in 1884"	... 40
Do. *Observer* and its Correspondents ...	... vii
Do. Past History of, as a British Planting Colony ...	60
Chinese, The, as Workmen	... xi
Cinchona Bark, Statistics of	... vi
Do. Cultivation	vi, 48
Do. Estimate of Outlay and Yield ...	74-74*a*
Cinnamon, Statistics of	... vi
Climate of Ceylon	ix, 6, 10, 11
Coconut-planting—Estimate of Outlay and Yield	... 75
Coffee, Cinchona and Tea on the one Plantation Cultivated profitably	... 66
Do. Estates Converted into Tea Gardens	7, 47, 64
Do. do. How to Make Pay ...	57, 66-67
Do. Statistics of	... v
Colonists, Young, Hints to	... 12
Coolies, Earnings of, in Southern India and Ceylon	... ix
Cost of Forming a Plantation	... 6
Criticism of the Tea Enterprize	... 15
Currency of Ceylon	... 77
Depression in Ceylon	... 4
English Girls, an Opening for, with their Brothers	... xii

INDEX.

	PAGE.
Ferguson, J., Letters to London *Times* and Interview with *Pall Mall Gazette*	...i-xiii
Fibres in Ceylon	... iv
Free Labour in Ceylon	... ix
Haputale District, Rainfall and Prospects of Tea in	... 21
Hints to Investors	... 5
Do. to Young Colonists and Planters ...	12, 40
Information, detailed, about Planting ...	... 77
Kew Gardens and Ceylon Planters ..	... xiii
Land for Tea in Ceylon	... ix, 6
Leaf-disease in Coffee	iii, vii, 56
Letters to Young Enquirers in the Old Country	... 4-68
Life in Ceylon	... 58
London *Times*, Letter to, on Ceylon Planting Enterprize	i-vi
Mariawatte Tea Plantation, Yield of ...	... 18
Matale District, Rainfall and Prospects of Tea in	... 23
North Borneo, Prospects of	... xiii
Nuwara Eliya District for Tea ...	... 30
Do. Yield of Plantations ...	... 32
Outfit for a Young Planter	... 42
Pall Mall Gazette, Report of Interview on Ceylon	vi-xiii
Palm Trees, Statistics of	... vi
Plantations in the Old Districts with Different Products	28
Planters, Ceylon, in Other Lands ...	... 57
Do. Young, Practical Hints to ...	12, 40
Planting Enterprize, Review of	vi, 1-4
Do. How it Won't Pay	45, 53
Railways in Ceylon	... x
Rubber in Ceylon	...iv, 7
Speculation in Ceylon	...5, 44
Statistics of Planted Area, Crops, and of Exports	... v
Tea Cultivation in Ceylon	viii, 46, 62, 68
Do. Growing in other Countries... ...	... iv
Do. Estimates of Outlay and Yield ...	68-68a
Do. in Ceylon, the Other Side of the Picture	... 15
Do.-planter, The, at Work in Ceylon ...	... x
Do., Statistics of	... vi
Towns in Ceylon	... 58
Tropical Agriculturist and its Correspondents	... vii
Vicissitudes of Property in Ceylon ...	... 44
Voyage to Ceylon from England ...	... 41
Western Dolosbage for Tea	... 27
Young Men Wanted...	... vii

(*From the London "Times," August* 24, 1884.)

CEYLON AND ITS PLANTING INDUSTRIES.

TO THE EDITOR OF "THE TIMES."

SIR,—Ceylon and its planters have been several times referred to in the discussion in *The Times* on the prospects of sugar cultivation in the West Indies, and perhaps a brief *résumé* of the experience gained in the Eastern colony during a series of trying years may be of some interest and of service to planters elsewhere.

It is pretty well known how in the course of 40 years, from 1837 onwards, Ceylon rose from being a mere military dependency (involving a considerable annual burden to the mother country) to the position of the first and wealthiest of British Crown Colonies. During that period its population, revenue, and trade so steadily advanced that they well-nigh excelled those of all the West Indian colonies put together. The change was due almost entirely to the development of coffee-planting, which sent in the heyday of prosperity in Ceylon as much in one year as £5,000,000 sterling worth of the fragrant bean into the markets of the world, chiefly through London. Other branches of agriculture prospered and advanced during those 40 years, such as palm tree, cinnamon, and rice cultivation in the low country—coffee being grown on the hills—in the hands of the Sinhalese and Tamils. But it was through the capital introduced and the revenue created by coffee that the natives were enabled to extend their groves of coconut and palmyra palms, and that the Government could devote large sums to the restoration and construction of irrigation works, more particularly in supplying village sluices and tanks where the people were ready to make use of them.

So far as European colonists were concerned, coffee-planting almost exclusively claimed their attention, and many

of the Sinhalese also embarked in this enterprize. While coffee continued profitable, the counsels of those who advocated the cultivation of other products was treated as so much idle breath. Theoretically it was shown many years ago that the climate and much of the soil of Ceylon were better suited for tea than coffee; but still the felling and clearing of the most beautiful and varied tropical forests in the world went on until from 400 to 500 square miles of country were covered with the one shrub, *Coffea Arabica*, carefully planted, and scientifically pruned—topped at the height of an average gooseberry bush. Nature was, however, preparing the punishment of a gross violation of her laws—a violation paralleled by the would-be dependence of the Irish 10 years ago on potatoes, or by the cultivation in other countries of too wide and unbroken an area of wheat, or of the vine. The penalty in Ceylon was first manifested in 1869, through a minute fungus on the leaf, very similar to the *oïdium* in the vine, rust in wheat, and the potato disease. For some seven or eight years not much was thought of it, save as an inducement to more liberal, careful cultivation; but the scientists called in to investigate, showed that little or no practical check could be offered, and within 15 years,—to make a long story short,—the minute, despised fungus had swept 100,000 acres of coffee cultivation out of existence—the poorly cultivated native gardens and neglected plantations being naturally the first to be abandoned. At the same time the export of the coffee bean fell last year to one-fourth the *maximum* of 1,000,000 cwt.

Here was certainly a grave misfortune overtaking a body of industrious men who had been the mainstay of a country's prosperity, and, moreover, their difficulties were aggravated by an extraordinary development of coffee production in Brazil. This was due to the interior of that South American Empire being rapidly opened up by railways made out of borrowed money; the labour, at the same time, used in cultivation fresh coffee plantations being slave. Such competition might be deemed unfair—more particularly as it has taken ten years' agitation in Ceylon—to secure an extension of

less than 70 miles of railway from the Colonial Office; but, in place of looking to the Government for factitious aid, the Ceylon planters ten years ago turned their attention to new products with all the energy and intelligence for which they are famous beyond any other tropical cultivators.

In many cases, of course, the new products, such as cinchona, tea, cacao (chocolate), and rubber, were experimented with as supplementary to the 175,000 acres of select coffee still maintained in cultivation, and let it be noted that in interspersing his coffee fields with cinchona and rubber trees, in planting belts or boundaries of such or areas of reserve in tea, the Ceylon planter was using one of the best means of checking the free dissemination of the fungus (*hemileia vastatrix*). As a consequence, possibly, or perhaps because the virulence of this pest is abating, during the current season Ceylon is giving an improved crop of coffee, and the export will be in excess of last year's.*

At the same time, the plantings of tea and cinchona bark have become established and important industries. The export of the latter this year will probably be equal to 10,000,000 lbs., against a beginning in 1869 with only 28 oz. Nor is it expected that South America can ever again compete with the East—Ceylon, India, and Java—in the production of the invaluable febrifuge.

Again, it is acknowledged on all hands now that Ceylon is better adapted to become a great tea-producing country than ever it was to lead with coffee. Situated in the pathway of the two monsoons, with an ample and well-distributed rainfall, in a most forcing climate, Ceylon is a perfect paradise for leaf crops. Fruit is more uncertain, and even in the best days of coffee great uncertainty often prevailed during the six weeks or two months of blossoming season, when too much or too little rain often destroyed the chance of a due return for a whole year's labour. Coffee, too, could only be cultiv-

* It was 324,000 cwt. against 260,000 cwt. the previous year.

† It was 11,492,000 lb.

ated within a certain limited belt, from 2,500 up to 5000 feet above sea level, whereas tea flourishes almost from sea-level to 6,000 feet and over. The tea shrub, in fact, is one of the hardiest of plants, growing in the open-air at Washington, United States, in New Zealand, &c. But the great advantage possessed by Ceylon and India for tea planting, is in cheap, suitable labour for the work of cultivation, leaf plucking, and preparing. The little island of Ceylon, as now opened up by railways and splendid roads, offers great advantages over most Indian districts for tea production. From both countries the tea supplied is of a pure, high quality. China teas have, in many cases, deteriorated of recent years, while the Japanese "greens," chiefly sent to America, are nearly all adulterated. I may, in passing, say that should the war now begun between France and China interrupt the tea trade or production in the Far East, there is no place whence a return can be so expeditiously got for the investment of capital in tea as from Ceylon. There is a wide extent of land available for tea, at an upset price of 10 rupees (16s.) per acre freehold, and a good crop of leaf can be had within three years of the planting. Assam planters who visit Ceylon are loud in their praise of what they see in the growth of our tea, our fine climate, unequalled roads, good supply of labour, &c. The progress already made in the tea industry may be seen from the figures appended.

The Cacao, or chocolate-yielding fruit tree, is another new article of cultivation which has been successfully established in several districts in the island; the Ceylon product from this plant being pronounced in Mincing-lane to be equal to the very finest received from Trinidad or South America.

Indiarubber-yielding trees of various descriptions have, during the past few years, been extensively planted in Ceylon; but the industry is still purely experimental, although good samples have been seen in the London market.

In Fibres, there ought by-and-bye, to be a great development of industry and trade in Ceylon, and, indeed,

about 265,000 cwt. while 1884 is expected
"capital" is the only element wanted to
progress in all the branches referred to.
the Oriental Bank has reacted disastrously
money very scarce for the poor but industr
while, again, the credit of the colony has be
in many places through the non-success for many years and the final collapse of the Ceylon (but more properly Mauritius) Company, Limited. It is at this time, and in view of the absolute scarcity of capital and depression of credit, that many planters in Ceylon think their industries in "new products". should receive some official support; but they have no idea of interfering with the great principles of free trade or of making a grievance out of the advantage possessed by the slave-owning planters of Brazil.

It is a matter for congratulation that from the very beginning, the Ceylon planting enterprize has been based on a system of free labour, and that its products are so universally appreciated and beneficial as coffee, tea quinine, chocolate, cinnamon, palm oils, &c. There is every reason to feel assured of a profitable return for money judiciously invested in these "new products" in Ceylon, and the much-tried sugar-planters of the West Indies cannot do better than make experiments in the same direction, although, I am free to admit, that the comparative scarcity and dearness of their labour, places them at a heavy disadvantage.

J. FERGUSON, of the *Ceylon Observer* and *Tropical Agriculturist.*

Royal Colonial Institute: 15, Strand, Aug. 23, 1884.

The following are Statistics of some of the Planting Industries in Ceylon:—

Coffee.—1837:—2,500 acres cultivated; exported about 10,000 cwt. 1847:—45,000 acres cultivated; exported about 200,000 cwt. 1857:—85,000 acres cultivated; exported about 450,000 cwt. 1867:—168,000 acres cultivated; exported about 868,000 cwt. 1877:—272,000 acres cultivated; exported about 976,000 cwt. 1883:—174,000 acres cultivated; exported

export of over 350,000 cwt. of coffee—a welcome revival.*

Tea.—The export began with 482lb. in season 1875-6; the export rose to 81,595lb. in season 1878-9; and the export rose to 1,522,882lb. in season 1882-3. The current season will probably show an export in excess of two million pounds,† and when the 35,000 acres of tea now planted are in full bearing, in 1887-8, the season's shipments ought to be equal to 10 million pounds. Eventually it is estimated Ceylon should have 150,000 acres under tea, and an annual export of 60 million pounds and upwards. It depends on home capitalists very much how soon this result may be realized.

Cacao.—The export of cacao (or cocoa as it is called in the market) began with 10 cwt. in 1878, and last year it was 4,000 cwt., while for the current year it is likely to reach 10,000 cwt.‡

Cinchona bark began with an export of 28 ounces in 1869; rose to 507,000 lb. in 1879; and was last season equal to seven million pounds; while for 1883-4 the return will exceed 10 millions.§

Palm Trees and Cinnamon.—Of the products of palm trees and cinnamon bushes, cultivated chiefly by native owners, Ceylon now sends an annual value of from £800,000 to a million sterling into the markets of the world, against less than one-fifth of this value 30 years ago.

THE PROSPECTS OF ENGLAND'S CHIEF TROPICAL COLONY.

AN INTERVIEW WITH A CEYLON JOURNALIST (MR. JOHN FERGUSON).

(*From the "Pall Mall Gazette," August 29th; and "Budget," Sept. 5th*, 1884.)

"We have not now 'all our eggs in one basket.' At present the city will not look at Ceylon as a field for investment. Money is scarce owing to the fall of the Oriental

* The actual export of coffee for season 1883-4 was cwt. 324,000.

† Do. do. of tea for do. 2,263,000 lb.

‡ The actual export of cocoa was cwt. 9,863.

§ The export of bark equalled 11½ million lb.

Bank, and our credit has been greatly damaged by the collapse of the Ceylon (more properly the Mauritius) Company. It should be known, however, that in our climate, roads, railways, cheap free labour, we have every encouragement for tropical agriculture in Ceylon. Our natives are being so rapidly educated that by 1900 A.D. English will practically be the language of the majority of the people. Colombo is the shipping centre of the Eastern world, thanks to Sir John Coode's new harbour; and capital judiciously invested in tea and cacao culture especially, is as likely to bring a good return as any agricultural enterprize I know of anywhere." Such is Mr. Ferguson's summing-up of England's principal tropical colony. He is inclined, it will be seen, to take an optimistic view of Ceylon and its future, but he speaks with the accumulated experiences of twenty-three years' residence in the colony. Then he has the numerous correspondents of his papers, the *Ceylon Observer* and the *Tropical Agriculturist*, scattered all over the tropical world where English planters are at work; some reporting on tea in Assam; on planting prospects in Java and Fiji; on the Liberian coffee in West Africa; and on planting in Brazil; while he himself has just been making the all-round the world trip, visiting California and Florida *en route*. "Nowhere is tropical agriculture so thoroughly studied and experimented on as in Ceylon."

YOUNG MEN WANTED.—"We now ask for young fellows of the right sort—even public schoolmen, university men—any one with pluck and energy who comes determined to fight his way against all odds. Do not mistake me. We do not want to be flooded out by thriftless never-do-weels, who have failed at everything they have turned their hands to, but resolute chaps with a little capital to invest, though they must first serve an arduous apprenticeship, for there is no royal road to tea-planting. No young fellow should come out without some money and letters of introduction to planters or merchants. A tropical country is very different in its conditions from Australia and New Zealand, where a man can turn to at once. Let us suppose our model young man landed at Colombo and dispatched to a station to serve his novitiate. In some cases he might have to pay from £50 to £100 a year for his board and training, but if he shows any aptitude for his work and is a willing horse, he would well repay his cost for food and shelter."

THE FUNGUS SCOURGE.—"The story of the coffee blight is soon told. A few years ago, coffee alone was seen over hundreds of square miles of hillside and valley, eastward, south, and north of Adam's Peak. Then in 1869 the fungus appeared, and year after year it did its deadly work, and half ruined us. Here are some figures which put the

matter in a nutshell. Take the coffee production from 1847 to 1883 now. You have in 1847 an acreage of 45,000, with an export of 200,000 hundredweight; in 1857—85,000 acres, and 450,000 hundredweight; in 1867—168,000 acres and 868,000 hundredweight; in 1877—272,000 acres, and 926,000 hundredweight; in 1883—174,000 acres, and 265,000 hundredweight; whilst 1884 is expected to give from 300,000 to 350,000 hundredweight. I think we may fairly say that the point of depression has been turned, if the estimate proves anything like correct."

TEA WILL SAVE US.—"What happened after the coffee blight became serious?" "Why, naturally enough, many of the plantations were deserted, the capitalists took fright, superintendents were thrown out of employment, and set off to other countries. There was a regular migration to Northern Australia, Fiji, Borneo, the Straits, California, Florida, Burmah, and elsewhere. I should say that out of our 1,700 planters we lost at least 400 in this way. In Northern Australia, at Port Darwin, three or four of our Ceylon planters have planted coffee and cinchona; in California some are busy with vines and oranges. Some have gone to Florida among the orange groves; but a Floridan orange grove requires twenty years to come to full maturity, though the trees begin to bear long before that, say in six years. There is a ready market in America for the fruit, but a man requires to work hard there and to know his business before his speculation is likely to prove remunerative. But in Ceylon our indomitable planters, who stuck to their posts, began to turn their attention to other products—tea, cinchona, rubber, cacao; some 175,000 acres of coffee being still under cultivation. Many of the coffee planters ran belts of rubber trees and cinchona between his coffee bushes, thus helping to check the spread of the dread coffee fungus. I think the statistics show that the scourge is abating; but whatever comes of coffee, Ceylon will become a great tea-growing country within the next few years. When the 35,000 acres of land now under tea come into full bearing, in three or four years we expect to export ten million pounds. Some day Ceylon will have 150,000 acres under tea, and an annual export of sixty million pounds and upwards. Home capitalists have only to say the word. From 482 pounds of tea exported in 1875-6, the amount in 1882-3 reached a million and a half pounds. The yield of cacao for this year is likely to reach 10,000 cwt. Last season we exported 7,000,000 pounds of cinchona bark, this year it will be 11,000,000; while of cinnamon and palm tree products (grown chiefly by natives) we ship nearly a million sterling's worth. The Sinhalese and Tamils are quite ready to follow the European planters in reference to the new products of late

years being introduced into Ceylon. They have planted the cinchona, cacao, and rubber trees; but specially are the Sinhalese likely to become extensive growers of the tea plant."

THE LAND AND THE CLIMATE.—"Now is the time to buy land, for we are on the turn after years of depression, and such land as you can now buy for 16s an acre, may in a year or two be doubled or trebled in price. Just as was the case in the years between 1868 and 1875, when every one was 'going into coffee,' and forest land sold for £20 an acre in some districts. Since 1833 some 1,300,000 acres of Crown lands have been sold (to European and natives), at an average price from 1833 to 1844 of 10s 8d., from 1844 to 1883 the average has been 35s., and the upset price now is 16s. There is no land tax, except within the areas of the towns." "And what about the climate?" "Delightful—for the tropics most healthy, and not much hotter than it has been in London during the past few weeks, even at our hottest on the hills. Most of the planters and their assistants enjoy the best of health, though of course pioneers and those who have to work through new forest and in the lowcountry, often suffer from malarious fevers. But then have you not the cool mountain station to fly to as a restorer? There is Nuwara Eliya and Bandarawela, on the plateau of Uva Principality, where you get coolness, with health-laden breezes—and I have even broken the ice in my water jug, in a Nuwara Eliya cottage. Given a change now and then, good food, care, and temperance—a European is as well off as regards climate (some might say better) than at home here."

FREE LABOUR.—"One of our greatest advantages is 'Free labour.' Close at our shores are the twelve million coolies of Southern India, whose average earnings are between £3 and £4 a year each. Yes, and he is able to live on it, too, and to support a wife and family. From this vast source we draw our supply of labourers, and fine, well-trained, diligent fellows they become. They come over with perhaps a wife and three or four children; the yare engaged for a period, a month's notice sufficing to terminate the contract on either side. There is a hut ready for them, with a bit of ground for a garden, in which they grow vegetables and so on; the planter gives them a blanket and food until they are able to repay him out of their earnings. Their wages average from ninepence to a shilling a day for a man; a woman can make about 7d., and a child 5d., so they are well off; they save money, and when they go back to their own village in a year or two's time, they have probably some five or six pounds in their pouch. This the careful coolie invests in a piece of land, which, on his return to the Ceylon plantations, he

leaves in charge of a relative or a friend until he goes home again. Our Kandians, or highlanders, are splendid axemen, and it is they who do the felling of our forests and the clearing of the land ready for planting. Then the South Indian coolies do the digging and planting. The land, by the way, lies generally on timbered slopes. The axemen begin at the bottom, cut each tree half through, and work up to the top. The highest fringe is cut clean through, and with its weight brings down the rest of the slope in the fall. The Sinhalese themselves refuse to do any agricultural work for Europeans. It is beneath them. They are our carters, employed in taking the tea and coffee, and so on, from the stations to the coast. If I remember rightly there were some 13,000 licensed carts a year or two ago. The Sinhalese are also our boatmen and artisans and domestic servants. Now, many of our Sinhalese and Tamils are wealthy. One, indeed, is the richest man on the island, with an income of some £20,000 a year or more. Some of the coolies, I must confess, are sad thieves. You may of a Sunday meet a man and his wife on the road, one of them carrying a cock the other a hen. The birds are all their portable property, which they are compelled to take with them while visiting some friends, lest they should be stolen."

CEYLON RAILWAYS.—"The cost of the Colombo and Kandy Railway, of 74 miles, was £1,740,000. Then an extension to Nawalapitiya from Peradeniya, 17 miles, was opened in 1874; and an extension from Kandy to Matale, 17½ miles, in 1880. Besides these, a seaside line has been constructed from Colombo to Kalutara, 27½ miles. In August, 1880, the first sod was turned of an extension from Nawalapitiya for 42 miles to Upper Dimbula, whence it was intended to be carried 25 miles farther to Haputale. Altogether about 180 miles of railway, all on the 5½ ft. gauge have been opened or are under construction. But there is one grievance which I should like to point out concerning these railways. The length of forty-two miles from Nawalapitiya to Upper Dimbula will probably be opened in May, having cost £900,000 of money. But then they are going to stop short instead of pushing on as was proposed to Haputale, the real terminus, with new traffic, which is only twenty-four miles farther, and would cost £400,000, and open up a vast amount of splendid country, which at present is compelled to send its produce round by road, a distance of 200 miles—a road which is subjected to floods, too, to say nothing of the delay and cost."

THE TEA PLANTER AT WORK.—"Let us suppose that a young man has learned his business, and has a thousand or two of capital. He buys 200 acres at 16s. an acre. He would begin by opening up, say, twenty-five acres his first year, clearing,

draining, and planting. Then, in his second year, he would prepare another twenty-five acres. Up to and including the third year his outlay would be about £20 to £25 an acre. In his third year there would be a crop of tea-leaf—a small one. In the fourth and fifth years he might expect, supposing that he is lucky, to have a crop of tea of 400 lb., to the acre, which he would lay down in England at 9d, a lb., which would produce in the market from 1s. 3d. to 1s. 6d. a lb., thus leaving a margin of 6d. profit. Then he would advance, not laying out too much capital to start with, but gradually feeling his way. All the year round tea requires one man per acre, in crop time a fuller force. It is hard physical work, though there may be no absolute manual labour. At five in the morning the bugle sounds for all hands, the planter comes down to the muster, the coolies go off to their work, the master has his coffee and follows them going on foot of course, from point to point, supervising and directing, and at 11 a.m. he returns to his breakfast. Until 3 p.m. he remains indoors, attending to business matters, the going out again for another spell of work and inspection. And so the days pass." "Snakes?" 'Boots and clothing are a great protection against snakes, and during the last sixty years I don't think there has been one case of death among the whites. The natives, of course, have no protection from clothing, and are more careless. In Ceylon our coffee machinery for pulping, for skinning, for drying, has been brought to a state of perfection, and the machines manufactured at Colombo are known throughout the tropics. It is this attention to improvements that has helped us so materially. Our planters are men with ideas, which they are quick to put into force. So it is with the new industries—tea, cinchona, cacao—the machinery for their preparation is being improved every day. You see Ceylon is a comparatively small country, and the planters are able to compare notes. A hears how B is doing this, he tells it to C, they have a talk about it, and so the matter grows. Each district has its little centre (not to mention the health resorts on the hills), where there is a club and other facilities for the intercommunication of ideas."

The Ways of the Heathen Chinee.—"On my way from Singapore to China I fell in with a Sumatran tobacco-planter who had imported Chinese coolies at a cost of £7 to £10 a head, on an engagement of a number of years. Smallpox broke out among them. Now a Chinaman prefers death to disfigurement; he has no notion of revolving through endless cycles with a pitted face, so they took to suicide, and every morning the overseer came in with his report:—'Another ten to thirty pounds gone, sir. One to three more of 'em found hanging to a tree just

now.' This was a serious difficulty. So at last the planter issued a proclamation to the effect that the body of the next hung Chinaman, instead of being carefully coffined, would be cut into pieces. This device stopped suicide. Another curious fact respecting the peculiarities of the Chinese is worth mentioning. When a Chinaman signs articles on board ship one of them is that if he dies on the passage his body shall be embalmed and sent back to China. In the steamer between Yokohama and San Francisco, one of our stokers met with an accident. The doctor said the only chance for him was to cut off his leg. 'No, no,' said the stoker and 'No, no,' chorused his comrades. But in a day or two mortification set in, and the leg was sacrificed. The man died, and his friends were horribly savage at the desecration wrought by the doctor's knife and saw. But they made the best of it, and embalmed the mortified leg with the dead body of poor John. The Chinese in the Straits earn, if they are good workmen, about 4s. a day. Perhaps, we have three Chinamen all told in Ceylon, but it is curious to notice that after four days' steaming from Colombo to Singapore you are virtually in China, for the Chinamen are gradually filling the Straits up. Of course there is much to be said on both sides—but the Californians, so far as I saw, miss their Chinese servants sadly—in fact, a Chinaman is at a premium. In my opinion the time had not come in Western America to stop Chinese immigration. At present only traders are allowed to enter the country, though for every Chinese coolie who dies one is allowed to take his place. A big business is done in certificates from all I can hear. Why, I heard that one of the most violent of the anti-Chinese agitators still kept to his Chinese servants. He is not a true patriot, like the Englishman who refused to eat slave-grown sugar. Some two or three years ago a Queensland planter engaged 500 of our Sinhalese to go to his sugar plantations. They went, much to our surprise, for such a thing as Sinhalese emigration was unknown. They proved a bad bargain, for they were nearly all selected from gaol-birds of the worst type. Few of them ever found their way to the plantations, many were absorbed in the towns, whilst a few found their way back home."

An Opening for English Girls.—"There is just one word of advice I should like to give to fathers and brothers. To the latter, if you go to Ceylon or India—or to any other colony, for the matter of that—arrange after you have a house of your own to get your sister out with you. England is overstocked with women, who are clamouring for work and votes and husbands, too. Now England is sending out some of her best blood to its distant possessions. Why

should the young men go and not the young women? I am convinced that the presence of his sister would have saved many a young fellow, in the pioneering days in the tropics, from drink and ruin, if she had been there to look after his bungalow and minister to his wants. Fellows used to come in from a hard day's work on the mountain slopes, fagged and weary, to their bungalow. There was food for them prepared by native servants, but it was often not fit to eat. So some went to the beer or brandy for consolation. Things are better now, and ladies more numerous; but still, in colonizing, whether to tropical or temperate climes, sister and brother may well go out together. But there is no need for me to expatiate on the advantages of my proposal."

"What do you think of the prospects of the North Borneo Company?" I asked Mr. Ferguson, as he rose to go. "I cannot say from actual experience, but we have one or two correspondents there from whom we hear now and then. It took Ceylon seventeen hard years of pioneering before we began to think that success would be permanent, and North Borneo is yet a very young country. There are at present a few plantations of tea, coffee, and cinchona scattered along the coast, while collectors are at work in the interior gathering ivory and minerals. It is like other new colonies—it needs capital and men."

KEW GARDENS.—"I cannot, by the way, over-estimate the value of the work which Sir Joseph Hooker and Kew Gardens do for us, not only for Ceylon, but for all the tropical countries wherein fresh products are being tried. The Kew authorities have correspondents and collectors in all parts, and if any one wishes to try experiments he has only to write to Kew for advice and specimens, which are forwarded to him from the gardens. You might think that it would be easier for us to send to the country where the plant or fruit was indigenuous rather than to England, but the difficulties would often prove too great. Kew is of vast service to the planters in many respects." "The military force," said Mr. Ferguson, in conclusion, "situated in Ceylon, costs us £120,000 a year, or 10 per cent of our revenue.* Now, why should we be compelled to expend this sum on British troops we don't want. It is a serious grievance. You use Ceylon as a convenient centre, from which you may draw in case of any little war in India, in China, in New Zeland, in South Africa, or Egypt. I do not think it fair to impose this burden upon us."

* This burden has since been reduced by one-half, very much through the influence of Governor Sir Arthur Gordon.—In some other parts of the *Pall Mall* report of this Interview I have made corrections where my remarks were slightly misunderstood.—J. F.

"CEYLON AS A FIELD FOR THE INVESTMENT OF CAPITAL AND ENERGY."

Such a heading fifteen or even twelve years ago could only apply to an extension of the great planting enterprize of the colony in coffee. Subsidiary products were sneered at equally by capitalists and planters—by merchants and proprietors. The experiments so far made in tea did not promise much success, at least judging by the fields of the Ceylon Company Limited; while as to cinchona, who cared to invest time or money in covering any acreage beyond a mere patch, with a product only used medicinally? With middling plantation coffee ruling at over 100*s* per cwt. and the utmost confidence felt that proper cultivation would dispel the *Hemileia vastatrix*, then first coming into notice, why should a rupee be invested or an acre cleared for any other than the one great and profitable staple? Such were the questions or objections raised about "new products" a dozen years ago. We remember about that time urging caution, and calling on newcomers, then freely flocking in, to base their coffee investments on no higher estimates than 3 cwt. per acre of crop and 80*s* per cwt. of value—figures then considered ridiculously low, although now they may be regarded as maxima in connection with this branch of our planting industry. It may be calculated that between 1869 and 1877, there were no less than 3½ millions sterling introduced into Ceylon for the extension of cultivation apart from the outlay on plantations previously in existence. The fresh capital brought in, therefore may be said to have then averaged some £400,000 per annum. Since 1877, we suppose one-tenth of this sum would be

above the annual average, although the interest awakened in tea especially, has made a difference within the past three years.

It is our object now to show, as far as we legitimately can that Ceylon in its new products offers as good a field for judicious investments as any with which we are acquainted in the wide circle of British dependencies. We acted on this belief in writing the letter which the London *Times* published a few months ago and in answering the enquiries of the representative of the *Pall Mall Gazette*. With the same object in view we now begin the publication of a series of papers by planters of more or less prolonged local experience for the benefit more especially of many persons outside the island who, at this time, are looking to it for the investment of their energy and money. Although there are at present several indications of capital becoming more generally available for local use; yet the influx has to continue freely if progress is to be made with tea at the rate justified by the success hitherto attained on most, if not all, our tea plantations. There is therefore plenty of room for drawing further attention to the subject. Tea among all new products, is of course the most generally believed in and the most promising, because of the hardiness of the plant and the varieties of climate, soil and altitude in which it is found flourishing. Cinchona and cacao although very valuable—in fact the more valuable perhaps from one point of view, when fairly established,—have a far more limited range and the planting of them involve a good deal more risk. Some of the advantages of tea over coffee as an investment are found in the longer duration of crop time, the greater independence of climatic conditions and the steadier employment afforded to a certain labour force all the year round. The whole year's labour of a planter over his coffee fields was occasionally rendered valueless by unpropitious weather prevailing for one month or six

weeks when the bushes were ready to burst into, or to mature blossom. Again a coffee planter would come to Colombo to get advances on crop, estimated to be gathered six or nine months after date according to the blossom. The tea planter, as in the case of one whom we saw the other day, comes to an agent for an advance on the security of crop gathered month by month. "I don't want money"—as our friend said to his agent—"to be repaid out of next year's crop; but an advance which I shall begin tomorrow to pay off by sending you leaf for shipment, my picking going on steadily month by month." There is no doubt of the additional safeguard for capital which this fact gives in the case of tea over coffee investments. It is further urged that a tea clearing can stand neglect, a temporary stoppage of expenditure, without the permanent injury which was too often sustained under similar circumstances by coffee; while in the event of severe competition between India and China bringing down the price for a time to a point that allows no margin of profit, the Ceylon tea planter could suspend outlay without injury until the crisis was over. In the case of coffee (or any fruit crop), of course the berries must be picked when ripe or finally lost. As regards tea in India and Ceylon, enough has not been made perhaps of the greater economy with which tea can be transferred from the Ceylon plantations to the London market. The intermediate charges in Colombo are decidedly less than in Calcutta.

We think it will be found that the subject of the Papers above referred to, is treated with sufficient variety. Some of our correspondents have thrown their observations into Letters addressed to enquirers at home; others will give their experiences in an almost autobiographical form; while one writer will tell us "How he kept his Wattie" (plantation) all through the bad years. Notwithstanding many disadvan-

tages, the last-mentioned gentleman made his coffee pay working expenses and interest; and more, to give enough to cover the cost of planting cinchona which in its turn yielded funds sufficient to enable most of the land to be turned into a tea plantation; and this again is now valued at more than ever the coffee wattie was. But enough of reference to the several Papers which will tell their own story all in good time.

CHAPTER I.

THE PERIOD OF PLANTING DEPRESSION IN CEYLON DRAWING TO AN END—OVER-SPECULATION IN TEA DEPRECATED—SALUBRITY OF CEYLON TEA DISTRICTS—PROSPECTS BEFORE INVESTORS: TWO COURSES:—FOREST-LAND *vs.* OLD ESTATES—CAPITAL REQUIRED—PROBABLE OUTLAY AND RETURN—UNDER JUDICIOUS INVESTMENT, 20 PER CENT ON CAPITAL.

It is generally conceded by those who have long resided in, and are well-acquainted with, the island of Ceylon, that the period of depression which has overtaken this country is coming to an end, and that a period of comparative prosperity may be confidently looked for in the immediate future. The failure of the coffee enterprize has been a severe blow to the Island, and one from which, not so long ago, it would have appeared inconceiveable that she could ever recover. Now, however, it is becoming more and more vident everyday that through the extension of the tea enterprize a fresh era of prosperity is at hand, and one it is to be hoped that will prove of lasting benefit to the Island.

Over-speculation, and the hasty and ill-considered expenditure of money in unsuitable land, will, it is to be hoped, be avoided for such can but lead to disappointment in the future as it has in the past. The judicious investment of capital in the tea enterprize by those resident in the Island who

have profited by the experience of past years, and by new colonists of the right stamp, is an event to be hoped for, and one deserving of every encouragement. Whether a period of *speculation* in Ceylon tea is about to occur or not, it is difficult to say. What has happened in the past may occur again; in the immediate future we have, however, to look for an influx of capital into the Island, which will render much of the land at present unproductive, profitable, and give remunerative employment to many who are now suffering from a period of depression which affects either directly or indirectly every individual connected with the planting industry. The general salubrity of the Ceylon tea districts is well-known, and the advantage which this gives us over our Indian brethren is proverbial. Any one unacquainted with the European residents in the Island would be astonished at the number of robust men who have already passed the better portions of their lives in constant residence here, and who are probably in better general health than they would have been had they never left England. Some of the lowcountry tea districts are in parts rather trying to some European constitutions, but even these districts (whichare becoming more healthy every day as the country gets opened up) are as a rule better than the other tropical colonies which offer inducements to investors. The hill districts, which comprise the large bulk of the existing tea estates, as well as large tracts of land suitable for tea, afford as pleasant and healthy a place of residence as can be desired.

Proposing investors in tea have two prospects open to them: they can either purchase forest-land in localities which have not been found suitable for coffee, or they can obtain estates which have been planted with coffee, and either abandoned or cultivated as the case may be. As a rule, the soil of the districts at present in forest is inferior to that of the coffee district, but

on the other hand its fertility has not been affected by previous cultivation. The soil of coffee estates that have not been badly affected by wash appears admirably adapted to tea cultivation in most cases, as the roots of the plant, which is a very deep feeder, are able to tap stores of nourishment left untouched by coffee.

The suitability of the Ceylon climate, with its abundant and evenly distributed rainfall, for the production of leaf, need not be enlarged upon; the advantages we possess in that respect are well-known. In the wet portions of the lowcountry the climate is very forcing, and causes a growth which is remarkable in what apparently seems a poorish soil. Hence, earlier returns may be looked for in such districts, and with this is joined the advantages of cheap production. Such land, being in all cases jungle, requires of course more capital to bring it into cultivation than coffee land.

On the hills in almost every case the only land available is that which has at one time or another been in coffee. If recently abandoned the cost of clearing such land is great: abandoned coffee of old date here showing a considerable advantage. In the case of cultivated coffee, however, much of the cost of putting the land into tea will be covered by the crop from it, whilst the cost of felling, roading and draining, and in most cases the erection of lines, bungalows and stores is avoided. Under such circumstances, the conversion of a coffee estate into a tea-garden becomes an undertaking requiring a comparatively small outlay of capital, apart from the original purchase.

R250 per acre should be amply sufficient to bring a tea estate into bearing, where the original purchase has been that of a block of forest land. Such land can now be procured for about R30 per acre and upwards. Where a coffee estate has been purchased a far smaller sum will suffice: the exact amount will

depend on the thoroughness with which the land has been originally opened, and the extent to which the old product assists towards the introduction of the new.

A capital of R60,000, or say £5,000 sterling, should be sufficient to bring into full bearing, with all the necessary machinery and buildings, a tea garden of 200 acres, allowing also for the purchase of a reserve of timber. A garden of this size, if care has been taken in selecting the seed, and if the soil is fairly good, should give a continuous yield of 400 lb. per acre, costing from 30 to 35 cents per lb. (according to circumstances) to put in Colombo, and netting at present prices 60 cents.

Low prices are, at the present moment, the burthen of most reports regarding Indian Tea Companies. The margin between cost of production and sale price is, just now, at the very lowest point compatible with the realization of a fair dividend; many concerns, in fact, yield no dividend at all under the present circumstances. Allowing, therefore, for a further fall in prices of 10 cents per lb., one which would have a serious effect upon many of our Indian friends, we still have a margin of profit of 15 cents per lb. or R60 per acre. This on a 200 acre estate, costing R60,000 to bring to a bearing age, shows interest at the rate of 20 per cent on the invested capital.

In the cases where coffee estates are purchased for conversion into tea gardens each investment must be considered on its own merits. As a rule, such investments offer great inducements to capitalists; for the returns from coffee and cinchona will usually go a long away towards meeting the cost of planting with tea, whilst the prices at present ruling for such land are very low.

In the foregoing letter I have not thought it necessary to support the statements made by any proof, nor has space allowed any entry into details: abundance of such are at the command of

any one who is desirous of enquiring closely into the subject. My object has been to shew briefly the inducements which Ceylon now offers for the investment of capital in the tea enterprize, and to illustrate the fact that the present moment affords opportunities which may not for long be so readily offered.

T. C. OWEN.

CHAPTER II.

[We now give a second instalment of the papers on this subject. Our correspondent this time—a planter of prolonged and varied experience—has chosen to throw his relation of experience and advice for men meditating investment in Ceylon, into the form of a couple of letters. These are supposed to be addressed to a young friend in the old country who has applied for information respecting the Ceylon planting enterprize and the prospects before investors. How well these supposed questions have been answered, we leave our readers to judge.]

TWENTY YEARS' EXPERIENCE OF CEYLON—NEW AND OLD PRODUCTS—SINBAD'S "MAN OF THE MOUNTAIN"—WORSE PLACES THAN CEYLON.

My dear ———,—I shall be happy, as desired, to tell you something of my Ceylon experience, giving you some hints therefrom and my opinion as to the advisability of your coming out to and investing in this country. My local experience as you are aware extends considerably over a score of years, during which I have seen many ups and downs, felt many hopes and disappointments, sometimes with the wise man learning at the expense of others, at other times with the fool at my own.

I early turned attention to what are now styled New Products, working up all the information I could gather both from men and books. Without capital, however my speculations were but theoretical, all the plant

ing of many an interesting and hopeful product being done in the gardens of castles in the air, and hope deferred soon made the young heart sick. Nevertheless, so novel were such thoughts in those jog-trot days of the one great staple—coffee, that friends regarded me as a visionary, more theoretical than practical, and one Colombo agent, a fine true-hearted kindly gentleman, now alas! no more, shaking his head, spoke of me as a good planter, but *very* speculative. The cry *then* was: stick to coffee, keep to the beaten track;—*now* it is: plant up new products, don't have all your eggs in one basket.

With time at length came savings, credit and what are called chances; but I had to forego my aspirations for the new, and start with coffee. Then came the earth hunger, investment after investment, buying and selling more or less to advantage, credit making credit, and with fair crops and handsome realizations, all finding fuel for future combustion. Gradually at first, unexpectedly rapid at last, things changed for the worse. Leaf-disease appeared, and yearly spread and intensified. In spite of much intelligent thought, hard work and high expenditure, crops fell off, prices followed, credit became restricted, cultivation was lowered, and at last our very coffee trees are disappearing before the advancing attack of black bug. Probably there is not one estate proprietor in Ceylon who trusts alone to coffee now, while the future is very dark indeed for him who has not largely planted up the old product with the newer cults. When the seriousness of leaf-disease grew evident, my thoughts were turned to the loves of my youth. In small ways I tried a whole host of minor cultivations. But too often, even when the requisite knowledge was acquired, the answer to the question, Will it pay? was unfavorable. In some instances the natural difficulties arising from climate and soil were unsurmountable; in others,

thieves, vermin and strange pests took more than the lion's share, while of most, one quickly found how very soon supply might overleap demand. As regards the major and now no longer new products— cinchona, cacao, cardamoms, tea, Liberian coffee, &c., I did of course, and have continued to do what I could, but with credit clipped and capital exhausted, means and time have failed to thus adequately fill up the void created by the rapid decadence of coffee.

If however, the continued struggle has become almost hopeless for many an old proprietor, it is not so for the country itself. The ownership of large areas of no longer profitable coffee and of fields that were of cinchona, together with an ever-growing accumulation of old advances, debts and liabilities, with interest, compound interest and annual charges piled high over all,—such a load, clinging more tightly than Sinbad's man of the mountain, weighing more heavily than Christian's burden,—may indeed swamp many a weather-beaten craft, but freed from indebtedness revivified by fresh capital, the estates themselves will again get a fair chance and do well. This digging out of old stock and replacing it with new blood may be a very painful saddening thing for some; and they, nobly struggling to meet liabilities, *are* to be pitied; but the sooner it comes the better will it be for all. Ceylon, with its unrivalled climate, equally so as a tropical country for animal and vegetable life, with its abundant cheap supply of labor, its admirable system of communications, with its energetic progress, its hard-won experience and its daily press, will again attract a new set of investors, who, buying far below intrinsic values and profiting generally at the expense of their predecessors, must while enriching themselves, restore prosperity to the Island itself.

There are still certain New Products that have not yet, but will in time make a name for themselves. In the low-

country particularly a good time and an enduring time will undoubtedly come some day when land there becomes cheaper and more accessible. But for the immediate future it is to tea we must look as the means that will largely bring back rich, warm blood to the heart and mainspring of the community—European enterprize. Cinchona will continue to be profitable in strangely favored patches; cacao will yield long, steady, easily-made returns in suitable localities; cardamoms for a time will give little fortunes; and other things in their order will help; but for general, great and speedy regeneration *tea* must and will take the place of our old and favorite staple.

Thinking I have now done more than justice, any way as to space, to the historical part of your request, I now more briefly proceed to give you the advice you seek. If you really desire to lead the life of a planter and to profitably invest capital in the East, then, if willing to work hard and thoroughly learn your business, to live as you should in all things and not to invest till after you have acquired the requisite knowledge and experience, then by all means come to Ceylon and go in for tea. There are worse places than Ceylon to live in, and its charm grows with residence. Ceylon possesses exceptional advantages for the production of tea, good in quality and at low cost. There are few, if any, of the larger tropical products more likely to bring in quick, steady, certain and continued returns than tea when judiciously planted and cultivated in Ceylon, and in the coming struggle with rival producers it will more than hold its own.

Should you feel inclined, as I expect, to act on my advice, I shall be pleased then to give you for guidance a few hints and lessons from dearly-bought experience and observation.—Yours truly, ———

CHAPTER III.

TEA CULTIVATION : RULES FOR THE GUIDANCE OF A YOUNG TEA PLANTER.

My dear ———,—I am glad to hear you have resolved to cast your lot in with us, and "do" Tea in Ceylon. As promised then I now proceed to give you a few hints founded on observation and experience, that you may begin where I leave off, and that, if my successes have led to little, my failures at least may be of service to others :

1. Stick to your *last*. If a merchant, merchandise ; if a lawyer, study your business ; if a doctor, attend to your practice. But if you determine to own estates, then change all that : first become a planter, learn your work and all about it, and then invest.

2. While not trusting altogether to one string to your bow, don't at the same time have too many irons in the fire. Find out what products suit you and your land best, then go in thoroughly for them and not fritter away time and money in every newthing.

3. Concentrate your investments. In coffee all depends on the chance weather of a few weeks, and so it was well to distribute risk, when, whether the season was wet or dry, some property would do well. But in tea, select the best locality you can, and then confine yourself to it, to the saving of much labor and time in inspection.

4. Seek an investment with capacities for large expansion. Begin as small as you like, progress as slowly as you choose, but let the land be there for future big things. In the ultimate struggle for the market, other things being equal, the largest estate will have the advantage. If means compel, rather buy a small share in a large property than entire possession of a small lot.

5. Be neither the first nor the last to open in a new district, or to cultivate a new product. Pioneer-

ing is expensive, laborious, risky work ; but when all is plain-sailing profits are small.

6. In making your selection, other things being equal, give the preference to abundance of fuel ; still more to a plentiful supply of water-power : hand-work will never maintain itself against machine.

7. Avoid block loans. Never expect tranquility, independence, or success, unless you carry your title-deeds in your pocket. The nominal value of the land itself, the risk and uncertainty of all tropical cultivation, and the high rate of the interest, only render prudent, advances for working expenses and against produce.

8. Buy for cash. The discounts by the end of the year far outstrip the interest, making a handsome profit.

9. Realize when you can to advantage, and so turn over your money. More fortunes have been made by sales of estates than by sales of crops.

10. Bright as the prospects of tea are, seemingly certain as its success, still keep a weather eye open for all natural pests and blights. With coffee leaf-disease as a terrible warning, never forget that little beginnings sometimes make great endings.

11. Cultivate for utility and not for appearance. In former days that continual titivation to make things look nice often led to much profitless expenditure of money that could be ill-spared. Estates are kept up not for show but profit, and the first question to be always asked is : Will it pay ?

12. According to your purse have good substantial buildings when such become desirable, but don't be led astray by that *ignis fatuus*—permanency. "Sufficient unto the day," and in making buildings to out last estates, capital is but wasted.

13. Work out the profit and loss of estate-made cattle manure at the expense of your neighbour rather than of yourself. It could never be proved to me that this most extravagant of manures paid when

applied to coffee, and, if so, it is still less likely to pay when put to tea.

14. Fix your private income, and keep within the figure. This needs no comment.

15. Learn to know your coolies. A word in season is generally better than a blow or a checked name.

16. Give and take all the information you can. A stick-at-home is always behind the age, and if you wish to partake of the common stock, you must add to it.

17. Avoid quarrels. As a matter of policy enmity between neighbours and unpleasantness with officials do not pay; and the more you are in the right, the more you have been wronged, the more *charitable*, as St. Paul teaches, must you be. *The injured may forgive, the injurer will never.* At the same time, that the violent and the malignant may not have everything their own way, with the harmlessness of the dove combine a little of the wisdom of the serpent.

18. Take all reasonable care of your health, for without that there will be neither pleasure nor profit.

19. Lastly, do not altogether overlook, as the world too often does, that old scriptural precept: "*Haste not to be rich.*" There are things more valuable than riches, and self-respect is better than gold.—I remain, &c.,

---

After past experience, even within the leaf-disease epoch, of the "great expectations" (by no means realized) based on planting operations in Ceylon, we are aware how distrustful home critics are apt to be of a series of papers apparently all on one side. It cannot be said that the above writer, however, does not fairly put his case and hold the scales evenly. But we are really obliged to the planter who sends us the following letter, which, of course, was written without reference to what has appeared on the subject within the past few days. No one

an say after reading "Moderation"'s letter that there has been no adverse criticism of tea in our columns :—

To the Editor, "Ceylon Observer."

Dear Sir,—I do not wish, and I am sure you will not credit me with any desire to throw cold water on the tea enterprize in Ceylon, but the tendency of the planter to exaggerate all that is favourable and to conceal that which is unfavourable is a feature in his character which he appears to take some trouble to develope.

If my opinion of the present position of the tea industry and of the prospects before us were based entirely on what one reads in the local papers, I should arrive at the following conclusions :—

(1) That tea is an absolute unqualified success in Ceylon.

(2) That the area adapted for further cultivation is practically unlimited.

(3) That we have no difficulty in combining quality with quantity.

Now tea is not an unqualified success in Ceylon: nor anything like it. What is the yield per acre from the gardens in the immediate neighbourhood of Nuwara Eliya? I refer particularly to Oliphant, Mr. Rossiter's estates and Tommagong.

What is the return per acre from the Ceylon Company's places : the Hope, Labookelle and Vellaioya ?

What are results from the district of Medamahanuwara? Has an average of 300 lb. of made-tea per acre been secured from any estate in Kalutara or its neighbourhood?

Is it not true that in the district of Ambagamuwa a garden not a hundred miles from Strathellie has never yet given 300 lb. an acre and that the average from a number of years has been very much less than this?

How much tea has been sent away from the large estates lying between Ambagamuwa and Yatiyantota ?

Have any of the Dolosbage estates averaged more than 300 b. an acre?

Is it true or is it not true that 400 lb. an acre of pucka tea is a nearer estimate of the average from the districts

of Yatiyantota and Awisawella than the 700 which Mr. Cameron said might be expected?

That tea does pay and will pay well in many parts of Ceylon I do not for a moment doubt; but that it is all absolute success I deny, and let those who think it is make further enquiries particularly in the directions I have indicated.

Now, as regards the land adapted for further extension. A gentleman, writing a few days ago in the *Observer* signing himself "Peppercorn," seems to think that in the course of a very few years there will be one unbroken sheet of tea from the sunny shores of Kollupitiya to the frozen plains of the mountain Sanatarium. "Peppercorn" is not singular in this; on the contrary there are many equally simple. My own experience teaches me that good land is very hard to get, and that *inferior* land produces very inferior results. People are planting up old coffee estates with tea, and if you ask them whether they are satisfied that the bushes will flush freely in old worn-out soil, they say: "Yes, look at Mariawatte, Imboolpitiya and Kadawella; if these don't satisfy you, go to Windsor Forest and so on." Now none of the estates alluded to can be accepted as affording satisfactory evidence on this point, for the reason that they were all abandoned for many years and their soil was to some extent renovated.

I believe myself that several of our old districts will prove themselves admirably adapted to the cultivation of the tea plant, but so far we have absolutely no data to prove it; on the contrary the few statistics at our disposal are unfavourable, and yet one would not gather this from the papers. Can quality and quantity be combined is a question which must naturally suggest itself to a thoughtful mind

Mr. Taylor of Looleoondera, than whom a more inteligent, practical planter does not exist, contents himself with a very moderate yield: he does not distress his bushes and he tops the market. My own conviction is that he shows a larger profit per acre with his 350 lb. than others do with 600.

We have heard a great deal about Mariawatte lately how that it gave 1,000 lb. an acre and that it would have

given 1,500 if every flush had been taken at the proper time. No further information is vouchsafed: we are in ignorance as to the prices realized and the cost of production. Will the enterprizing proprietors of this very remunerative garden supplement the statistics they have already furnished us with by answering the following questions :—

How much tea was sold locally? How much was sent home, and under what marks? and what was the average per lb., including dust and fannings? Seeing that so much has been written about the yield, it is only fair the public should have information as to prices realized.

I heard it stated not long ago that Galbodde had given an average yield of upwards of 800 lb. an acre, and that the cost f.o.b. was 27 cents per lb. I do not believe this, but I will if Mr. Hughes tell me positively that the figures have not been exaggerated. I was also informed that this 800 lb. per acre had netted 80 cents in the London market. I *can* believe this, for the tea is very good indeed, and considering the yield, which is in the highest degree satisfactory, the result is probably unequalled; but how much of the inferior tea is sold in the country?

Aberdeen estate is, if I mistake not, somewhat steep and possesses an inferior soil. The rainfall per annum is not far short of 200 inches, and yet the yield from a certain field rivals Mariawatte. Here again further information is desirable. I should like to know the acreage of this field and whether or not similar results may be expected from other portions of the estate. I should also like to know how many leaves were plucked and the prices realized.

It is not fair to quote the yield only, nor is it fair to quote prices only: the two should in all cases be combined, so that conclusions may not be misleading.

My opinion of tea in Ceylon is briefly this.—In comparison with coffee and the hundred other things that have been tried and found wanting, it will come out favourably; but that every estate will turn out a Mariawatte or a Galbodde, or that an average yield of 800 lb.

will be exceeded, taking the country all through, I do not for a moment believe.

I am quite sure that at least 30 per cent of the places already in bearing don't pay and that another 30 per cent show a very slender profit. I am also quite sure that very few people know this.

Before closing, I may say that a few more particulars respecting Abbotsford would make the very full statistics still more useful. I infer of course that tea plucked from the bushes along the roads and amongst the coffee is not included in the 110 acres. What prices were secured in the London market? How much tea was disposed of locally and what was the cost of production?—Yours faithfully, MODERATION.

As regards Abbotsford, we may say at once—and we are glad of this opportunity of contradicting unwarrantable statements to which, no doubt, "Moderation" refers—that the statistics published, referred only to the 110 acres counted as in cultivation, and by no means included the plucking of seed bearing bushes scattered throughout the coffee or along the coffee-field roads. "Moderation" is not alone in his scepticism, about the success of tea in Ceylon being so great or universal as is generally declared. Curiously enough last mail from England, brought us the following interpellation from an old planter whom "Moderation" knows well, one of a school noted for looking well before they leap, and whom to convince, therefore, of tea being a good investment, is worth some amount of trouble. Our friend writes :—

"No one knows how low Ceylon has fallen till he tries to induce people to invest or to interest them in anything connected with it. How different it was 7 years ago! Would there be any means of ascertaining the real truth about *Mariawatte*? Of course no one will believe in 1,200 lb., and £40 is out of the question; but if 600 lb. and £20 an acre could be reasonably calculated on, then I know thousands of acres of similar soil—if soil it

can be called—in a climate exactly suited: half Kadugannawa would come in again and three-quarters of Matale rejoice, and Balakaduwa itself be a fortune to any poor if industrious planter. Mariawatte reports, however, are too good to be true. Though I well remember that when one bushel coffee per tree was talked of at Rajawella the bare idea was scouted till a special agent from Colombo was sent to confirm the fact. These were the days before desperate estimates—and newspaper correspondents were more trustworthy than they are now!—no offence meant."

We think the Abbotsford figures, now on the way to this correspondent, will satisfy him that there is more in tea than he was inclined to believe, and, as if to answer his enquiry about Mariawatte, we are able to give the following letter published by our morning contemporary yesterday :—

RESULTS OF THE MARIAWATTE ESTATE UP TO END OF 1884.

To the Editor, "Times of Ceylon,"

Sir,—One hundred acres of tea were planted 4 × 4 in 1879, which distance apart gives 2,722 trees to the acre. At the present time there are fully 10 per cent. vacancies, so that the actual number of trees to the acre is about 2,450.

In 1882 50 acres were manured with cattle manure.
„ 1883 15 „ „
„ 1884 40 „ between August and Nov.

The manuring of 1884 cannot be taken as having affected the yield for 1884, as the estate was pruned gradually between August and November. The large yield of 1884 was obtained with 65 per cent. of the acreage being manured in 1882 and 1883.

The yearly yields per acre from the original 100 acres of Mariawatte estate have been :—

		Per acre.	Rainfall. inches.
1880		9 lbs	113·82
1881	...	136 „	117·11
1882	...	312 „	92·77
1883	...	550 „	82·72
1884	...	1.092 „	

The produce from the 100 acres in 1884 has been as under:—

Tea	lb.	109,230
Cocoa	,,	1,740
Tea Seed	Maunds	20

Monthly yield of Tea.

	lb. made tea	Rainfall inches.
January ...	4,296	0·52
February ...	4,124	0·48
March ...	5,138	6·44
April ...	14,607	5·05
May ...	16,544	7·99
June ...	13,188	4·75
July ...	14,830	4·44
August ...	13,236	9·56
September ...	11,182	5·99
October ...	3,102	18·86
November ...	2,611	10·01
December ...	1,393	8·63
Total	109,230	82·72

The weight of green leaf plucked per acre was close on 4 cwt. and the average yield of each tree was equal to 1¼ lb. of green leaf, or ·44 of a pound of made tea per tree.

Coldstream, January 12th. H. K. RUTHERFORD.

* First plucking began October, 1881.

It must be remembered that 1884 was one of the driest years on record on the Kandy side, and in the Gampola Valley the rainfall return was not more than 82 inches, which is well within the average of many Uva estates. On another page (25) will be found Mr. Johnson's report from one of the driest portions of Badulla showing an average for eight years of 71·27 inches but so well-distributed that we feel sure tea will do fairly well, as indeed is evidenced by the growth already described by Mr. Johnson. Then again from Haputale and Matale we have returns which may as well be included here:—

HAPUTALE (BELOW THE PASS).—Rainfall in 1884 was :—

	days.	in.		days.	in.
January ...	15	2·32	August* ...	7	·4
February ...	9	3·64	September* ...	6	1·20
March ...	15	15·24	October ...	23	7·41
April ...	21	15·16	November ...	20	24·94
May ...	18	16·66	December ...	20	12·10
June* ...	3	1·07			
July* ...	3	1·04		160	111·19

* The average number of days on which rain fell during these months in twelve years previous were

June...	9·5 days.	Aug. ...	12·08 days.
July ...	8·42 „	Sept. ...	12·42 „

These months have therefore been exceptionally dry for Haputale. Do you consider Haputale too dry for tea? Certainly not—with 111 inches! Here is another report from a different part of the district:—

WEST HAPUTALE, 9th Jan.—After perfect planting weather, from 4th October to end of December, January has opened very dry with a parching wind which is disastrous to the tea planted (seed planted at stake especially) during December. Tea appears to grow here like a weed, and with our rainfallt which, as enclosed statement for 1884 will show, is all that could be desired for the satisfactory growth of that product, I cannot see how tea can fail to give remunerative returns, *if* we are to get anything like the good prices for our tea which many believe we will do. Nothwithstanding the long drought during June, July and August, the rainfall for 1884 has been 54·11 in. over that of 1882, and 29 83 in. over what fell in 1883. I do not think anyone is rejecting *really* good coffee for tea: but where tea is planted the coffee must be sacrificed. The theory of getting crops from the coffee, while the tea is growing, will not hold good. Our good coffee has a crop on it as much as we could wish for, little or no disease showing. Cinchona succirubra has been a great success

so far as the growth is concerned: were prices better all would be well. The following is the rainfall for 1884.

Jan.		Feb.		March.		April.		May.		June.	
6	0·04	1	1·50	3	2·93	3	0·82	5	0·74	28	0·
14	0·04	2	1·20	13	0·88	4	1·33	6	0·87		...
15	0·03	3	0·72	14	1·25	6	0·19	7	0·77		...
16	2·52	5	0·54	15	3·48	7	0·24	8	0·47		...
29	2·04	6	0·94	16	2·21	8	0·26	18	0·39		...
	...	7	0·31	17	0·31	13	1·10	17	1·21		...
	....	8	0·92	18	2·01	14	1·15	23	0·75		...
	....	28	0·37	19	2·12	15	0·97		...		...
	....		...	20	0·32	23	0·79		...		...
	...		....		...	24	1·10		....		....
	...		...		...	25	2·03		...		...
	...		...		...	26	1·07		...		...
	...		...		...	27	0·14		...		...
	...		...		...	28	0·10		...		...
	...		...		...	30	1·10				...
Total ..	4·67		6·50		15·51		12·39		8·29		0·99
1883 ...	5·95		6·11		11·70		12·84		16·46		2·72
1882 ...	17·39		4·73		7·98		11·58		6·03		3·01

July		Aug.		Sept.		Oct.		Nov.		Dec.	
		22	0·02	6	·07	4	0·07	1	2·70	3	·14
		26	0·01	11	·10	5	2·85	2	1·20	4	2·27
		27	0·02	12	·17	6	4·41	3	2·91	5	1·10
				18	·60	7	3·02	4	1·51	6	·70
				19	·40	8	2·92	5	6·37	8	·69
				22	·17	9	3·35	6	·10	9	·70
				25	·10	10	4·21	7	·50	11	1·16
						12	2·36	9	·20	12	4·00
						15	1·26	10	1·09	13	·74
						16	2·00	11	·70	14	·05
						17	1·10	12	1·19	15	·75
						18	2·00	14	1·50	16	·20
						19	·31	15	1·62	17	1·27
						20	·80	16	·10	18	2·00
						23	·07	17	·10	19	1·40
						24	·05	18	3·20	20	·61
						25	·02	22	2·07	21	·19
						26	·01	23	·94	22	·44
						27	·02	24	2·90	23	2·47
						28	1·10	25	2·10	24	·14
						29	1·75	29	·46	25	·67
						30	1·10			26	·33
						31	1·05			29	·60
										30	2.01
										31	15
Total...	...		0·05		1·61		35·93		33·28		24·18
1883...	5·45		11·12.		3·18		13·92		15·49		8·54
1882...	3·16		5·28		2·32		5·21		11·96		10·55

Total 1884...	...	Rainfall inches	143·31
„ 1883...	...	... ...	113·48
„ 1882...	...	... ...	89·20

The average of the three years here is over 115 inches, so that, looking at the distribution of the rainfall over the months, a better climate for tea could not in our opinion well be desired. From Matale we have the following :

MATALE EAST, 9th Jan.—I enclose a memo. showing the rainfall here, for the past 6 11-12th years. With reference to our future in tea ; the figures show a sufficient and well-distributed rainfall, and, with our generally speaking good soil, there ought to be a good future for the old district yet. The 1883 plantings promise remarkably well, and with the present outlook are very encouraging : in several instances the growth is as fine as can be seen any where at the age.

Year	January. in.	days.	February. in.	days.	March. in.	days.	April. in.	days.	May. in.	days.
1878	No record		Nil.		3·88	13	5·51	18	8·56	16
1879	8·43	13	5·56	14	10·82	12	9·48	11	13·01	20
1880	7·92	8	7·77	14	6·18	21	11·51	19	5·22	8
1881	19·35	18	·78	4	2·04	7	6·75	9	2·80	8
1882	26·10	17	6·85	16	5·07	11	7·54	13	2·01	11
1883	9·50	21	8·00	7	2·42	6	15·06	15	12·77	13
1884	7·96	15	1·50	4	3·36	10	6·22	10	6·96	18
Total	... 70·26	92	29·96	59	33·77	80	62·07	90	52·23	101
Average No. of inches	13·21	...	4·28	...	4·82	...	8·87	...	7·46	...
Average No. of days ...		...	15·33	...	8·43	...	11·42	...	12·86	...
Greatest fall in any 24 hour	... 9·40	...	4·63	...	4·52	...	4·10	...	6·05	...
									14·43	

RAINFALL at — Estate, Matale East, for 6 11-12th years.

Year	June. in.	days.	July. in.	days.	August. in.	days.	September in.	days.	October. in.	days.	Nov. in	days.	December, in.	days.	Total in.	Total. days.	Greatest amount in any 24 hours. in.	Date.
1878	14·20	23.	16·51	15	7·32	23	7·77	25	8·28	18	15·10	16	3·51	13	90·64	177	4·30	July 16th-17th 6th-7th Nov.
1879	6·87	25	13·76	26	4·82	16	4·34	19	13·81	17	18·96	24	15·84	24	126·60	216	6·85	Dec. 8th-9th
1880	2·87	19	5·85	26	7·21	18	2·39	10	27·20	25	17·63	19	9·79	16	111·54	213	3·62	Oct. 2nd-3rd
1881	7·92	23	4·17	11	11·32	24	6·58	24	12·77	15	12·57	23	38·69	31	125·74	197	4·77	Dec. 3rd-4th
1882	8·65	22	16·19	30	15·00	28	2·72	24	19·91	30	21·42	22	23·02	11	153·98	242	9·40	Jan. 30th-31st
1883	6·14	20	7·61	21	11·58	25	2·88	16	17·13	26	16·08	25	14·36	28	123·53	216	6 05	May 8th-9th
1884	4·93	17	3·20	19	4·72	21	5·07	22	18·45	25	11·27	19	2·3·8	25	97·51	205	6·30	Dec. 12th-13th
Total ...	51·58	149	67·29	148	61·97	155	31·75	140	117·55	156	113·03	148	129·08	148	829·54	1,466	...	
Average No. of inches	7·37	...	9·61	...	8·85	...	4·54	...	16·79	...	16·15	...	18·44	..	120·39	...	...	
Average No. of days	...	21·28	...	21·14	...	22·15	...	20	...	22·29		21·14	...	2·14	...	211·61	...	
Greatest fall in any 24 hours ...	2·62	...	4·30	...	4·00	...	1·83	...	3·62		6·85	...	6·85		...	...	9·40	Jan. 30th-31st. 1882.

Here again we have an average rainfall of fully 120 inches spend ov r 211 days. The old and famous coffee districts of Matale and Uva, therefore, are likely to become equally famous as tea districts. In this connection we very pleased to learn that tea is likely to be planted on an extensive scale on several Haputale properties very shortly.

TEA AND RAINFALL IN THE BADULLA DISTRICT.

Dotlands Estate, Badulla, 10th Jan. 1885.

DEAR SIR,—Enclosed please find rainfall for the past twelve months, in which, you will see, there has been rain in each month, but, unfortunately, in the months of April and May (when a good fall is expected) we were much disappointed, and the usual dry months following have been the cause of our coffee being of such an inferior bean. I don't remember seeing autumn crop turning out so badly, although a larger percentage of light and deformed beans is usual after drought. The severe rains last month on the 8th and 12th caused the cherry to ripen up quicker than was expected. On the 11th, the cherry was in fine condition, and I looked forward the following day for a two-bushel picking, but during the night the rain ceased, and a dry north-west wind set in: by morning the cherry was withered, and one side dry on the trees; instead of a 2-bushel picking, it was as much as a cooly could get her 1 to 1½. Pulping it was out of the question at the time, and it was put into the cisterns, kept damp, and pulped two days afterwards. I wish I could say leaf-disease was on the wane. With me, it has appeared again, and by what I heard in Badulla last week it was *general*.

I enclose you a few tea-leaves from bushes 9 months old to 10, the average being 4 feet, and many 5½, with 4 and 5 primary branches. The few trees I have round the bungalow have

flushed 8 times the past year, although the weather was so dry, and I feel sanguine it will do well and pay if we get the railway to Haputale, and, better, if it ever reaches Badulla.—I am, dear sir, yours faithfully,

T. J. E. JOHNSON.

Months 1881.	Days.	Rainfall	Average for 8 years.	Remarks.
Jan.	19	6·26	10·83	Dec. 8th.—There was heavy
Feb.	5	0·92	3·40	rain: fall 4·01, out of which
March	8	2·70	4·95	2·96 fell in 1¼ hour.
April	9	5 40	7·24	Dec. 12th.—Gauged 4·96—bot-
May	8	4·96	4·90	tle overflowed during the
June	4	1·48	1·56	night. With this storm the
July	4	1·00	2 20	wind at times was very severe
Aug.	7	3·48	4·45	varying from N. E. to N. W.
Sept.	6	1·17	4·15	Dec. 13th.—Strong dry wind
Oct.	18	10·23	6·83	from N. E.
Nov.	17	8·80	8·82	
Dec.	23	17·92	11·94	
	128	64·32	71·27	

[The leaves are large enough to stand the test of "indigenous," covering the palm of one's hand.—ED.]

TEA CULTIVATION AND YIELD AT HIGH AND MEDIUM ELEVATIONS IN CEYLON: No. I.

COFFEE WHICH STILL YIELDS PAYING CROPS—CINCHONA BARK KEEPING UP OLD COFFEE.

The annual and weekly reviews of a number of London tea broking houses are to hand by the mail, and the series of sales reported, including the really magnificent prices for Rookwood teas, are very satisfactory. Several of the London firms call attention to our summing-up and review in which we deprecated too great haste on the part part of planters to transform all their coffee acreage into tea—and indeed too great haste on the of any individual proprietor to plant more

than a reasonable extent with the now leading product. We wrote in the interests of careful planting and careful selection of seed, as much as of retaining intact coffee fields that still paid for expenditure if not some interest on capital. To cover the country again with the one plant will be too much like repeating the mistake at first committed with coffee; so we shall trust to see tea, cinchona and even coffee fairly distributed up-country, with in many cases, cardamoms, and cacao and even *coca* with the half-a-dozen minor similar products.

Our friend and correspondent "Moderation" (see p. 15) has done good service to the cause of the tea enterprise in Ceylon by the suspicions he ventured to express and the questions he asked of the planting community. Mr. Drummond of Western Dolosbage, without dealing with a thousand of pounds per acre, or even half that maximum, gives good reason we think in his statistics of the yield from very young tea, for regarding his district favourably; and we have no doubt that a proportionably encouraging report can be given by planters in old Dolosbage. Travelling the other day in the company of planters so experienced and shrewdly observant as Messrs. Elphinstone, Talbot and Borron we had the opportunity of hearing a good deal on the *pro's* and *con's* of new and old products and also of the advantages and disadvantages of certain tea machinery. Mr. Borron had doubts as to the advantages of "No. 3 sirocco" which Mr. E. M. Hay of Goorokoya was certain would vanish no further acquaintance with a machine which in his experience did excellent work. The circumstance of Logie and Belgravia estates this season giving 11,000 bushels of coffee already gathered, with perhaps 1,500 to 2,000 more to come in, is encouraging to owners of the old product; for we believe not much manure was used to secure this result. The maximum crop

of these estates has however been so high as 23,000 bushels ; but the half of this with the present economy in working, will pay. Another instance of a change for the better is found in the case of an old Dolosbage property which in 1882, after an apparently good blossom, yielded for its harvest, but *ninety* bushels of coffee ! Now the same place this season, gives its 1,100 bushels of coffee, 20, 000 lb. cinchona bark, and a good many thousands of lb. of tea. That is the experience we should like to see realized on a great many of the old properties. In connection with Mariawatte and its fine tea returns, the question was raised as to whether it (as Weyunga. wattie) had ever done much in coffee although freely manured. Mr. Borron, who twenty years ago thought it amongst the finest-looking sheets of coffee he had ever seen, never heard of good crops ; but Mr. H. Blacklaw tells us that in 1860 it yielded some 13 cwt. an acre and, perhaps as a consequence, never did much afterwards although freely manured. The question then will be, is the tea now benefitting by the manure which the prematurely weakened coffee trees were unable to take up? Sir J. B. Lawes, of agricultural fame, expressly rules that the benefits of substantial manuring often extend over twenty years. Sinhapitiya, the property of the O. B. C. creditors, close by, promises to be another Mariawatte in success but with more diversified products. The question is asked why old Atgalla with its equally good lay of land and, possibly soil, on the other side, has not been taken in hand ; but this only brings us face to face with the "thousand of acres" which the "old Colonist" V. A. says he can point to, as good as Mariawatte, in Kadugannawa, Allagala and the region thereabout for tea. Our companions were certainly loud in praise of much of the soil between Gampola and Allagala : finer paddy straw or better fruit trees are not found any

where else upcountry. (By the way, has anyone else noticed the resemblance between the grassy hills on this side of Gampola to the lead and coal hills of Lanarkshire as pointed out to us by "Logie?") But we are bound to say that if there are encouragements to keep good coffee intact, we heard and saw enough upcountry to show the foolishness of cultivating miserably poor worn-out coffee. Apart from the utter ruin wrought in coffee in Matale and Kadugannawa, by bug (has this pest anywhere touched tea?) a Pussellawa planter was clear that his proprietors had sacrificed large annual profits derived from cinchona by spending it on coffee which gave no return. Many old plantations have, it seems, yielded bark enough of late years to pay well, had the outlay on non-paying coffee been stopped. But then "May not the coffee in some of these cases, yet come round as on the typical Dolosbage estate we have mentioned?" will be the question asked.

However, if we are to satisfy "Moderation," we must go higher up and deal directly with tea. Messrs. Forbes, Aspland, Grigg and Blacklaw have within the past few days, given us very favourable accounts of the growth and promise, aye and yield of young tea in Ambagamuwa, Lower Dikoya, Upper and Lower Maskeliya respectively. Of the good yield in these directions there can be no doubt and improvement in preparation after the pattern set by Gallebodde and Blackstone, will also go on. We are pleased to learn that Mr. Wm. Rollo and Mr. John Walker, now on a visit to Ceylon, have expressed themselves well satisfied with our tea prospects.

Higher up still, we had an opportunity—though only a brief one,—of marking the really wonderful flush on the vigorous and luxuriant tea-bushes covering the Abbotsford fields at 5,000 feet and upwards. The figures recently given by the manager must convince even "Moderation" that there is more in tea at a high

elevation than he had supposed. In the neighbourhood of Nuwara Eliya we had the opportunity of going carefully through several tea fields, not of large extent but sufficient to enable a judgment to be formed on the question before us. Some 36 acres under the small-leafed, shrubby but hardy China plant on Hazelwood, eastward of the Plains, on an exposed, rather bleak, and by no means fertile spot, are giving satisfactory returns up to and in excess of 300 lb. per acre although widely planted and hitherto, not regularly plucked. On this easy lay of land, and with a slow growth of weeds, the Assam system of digging in the grass and weeds three or four times a year is adopted, with a saving in working, and great benefit apparently to the tea trees.

No. II.—ASSAM-HYBRID TEA 6,000 FEET ABOVE SEA-LEVEL YIELDING 500 LB. AND UPWARDS, PER ACRE.

Mr. Rossiter's tea factory is situated close to the main road on Fairyland about 3 miles from Nuwara Eliya, and in it he prepares the leaf plucked from the hybrid tea in the surrounding garden; from the field of China on Hazelwood three miles away; from some 14 000 bushes in bearing of fine Assam tea on Capt. Bayley's Pedro property close by; from Mr. Grinlinton's Portswood estate, two miles farther on; and from Kandapolla, six miles dis ant from the factory. These properties as yet have so small an area, or rather number of bushes ready for cropping, that it suits the proprietors very well to allow Mr. Rossiter do the plucking with his own coolies and to receive payment at the rate of 4 cents per lb. for the wet leaf As yet it is the day of small things all round for tea crops in this neighbourhood; the total outturn from the Fairyland factory last year not exceeding 15 000 lb., although during 1885 Mr. Rossiter hopes to prepare and dispatch some 36,000 lb. Enough

has, however, been done in plucking leaf from mature trees carefully counted, to give the informa ion desired by our correspondent "Moderation" as to the probable yield of tea at a high elevation. Of course, it may be said that cultivation carried on in comparatively small patches and the statistics of harvesting from trees irregularly planted with abundance of room, afford no fair criterion for a regularly planted garden. But the margin afforded by last year's experience is we think wide enough to allow for any such deductions. In our last we said the hardy China tea scattered over rather more than 30 acres on Hazelwood, had given in 1884 about 3 0 lb made tea per acre. The return was fully equal to this if allowance be made for numerous blanks and for somewhat irregular plucking during part of the year. But there is the greatest contrast in the world between the hardy China alongside the Hakgala road, and the luxuriant Assam-hybrid bushes from 5 to 8 years old seen on each side of the Udapussellawa road, on Fairyland, or scattered over one or two fields of Capt. Bayley's very fine Pedro property, and again in the rich hollows of Portswood (Mr. Grinlinton's). Both of these latter are primarily cinchona plantations which have yielded already heavy crops of bark, from most valuable groves of officinalis and robusta trees—some of really splendid growth—still covering large portions; but both proprietors are going in extensively for tea, having flourishing nurseries with a good jat of plants ready to cover a considerable area now to be cleared. Captain Bayley has had his tea bushes which have been plucked during 1884, carefully counted, the result being 14,000 which if taken as equal to 5 acres, shows a return of 505 lb. of made tea per acre. Mr. Rossiter's trees on Fairyland are fully older and they have certainly done wonders, since he says that off 6 288 full bearing trees, there have come no less than

11,505 lb. of wet leaf or 2,876 lb. of prepared tea. This would be at the rate of from 900 to 1.000 lb. per acre! We have not got the number of trees in bearing on Portswood; but the full return of each month's plucking as kept at the Tea Factory is as follows :—

1884.	Fairy-land.	Pedro.	Ports-wood.	Hazel-wood.
	lb.	lb.	lb.	lb.
January ...	162	534	—	2,353
February ...	652	940	547	2.298
March ...	953	1,560	599	2 015
April ...	443	784	1,018	3.728
May ...	1,221	986	215	2.918
June ...	1,015	1,502	910	2,037
July ...	552	378	544	1.765
August ...	—	706	—	—
September ...	1,702	936	—	4,275
October ...	815	412	307	3,288
November ...	1,481	590	1,267	4,762
December ...	2,509	787	146	3,591
Total wet leaf	11,505	10,110	5,553	33,030
Made tea (¼)	2,876	2,527	1,388	8,257

Capt. Bayley remarks of the Pedro tea :—

I gave you the yield for 10 months once before; the other two months have brought down the average, but it seems to me satisfactory for 6,500 feet above sea-level. The tea was allowed to grow up anyhow and was pruned down with catties as I wanted to let light on to the cinchona I planted between. I am going to have it pruned down now somewhat more scientifically, and will see what it does after that.

Mr. Rossiter says of the same tea and of the prospects generally of the neighbourhood :—

I am satisfied that the clearing would have given fully double the quantity it did, had it been properly pruned early in the year. At all events it is satisfactory to know that land at this elevation is safe to yield over 500 lb. of tea per acre per annum and that without any extraordinary cultivation. For planting a new clearing here, I would advise 4 × 4, and if the vacancies are kept filled up as they occur, the clearing sheltered and the young plants

protected from the cold winds, the owner is safe to get as follows:—

2	years	from planting	150 lb.	per acre.
3	do	do	300 do	do
4	do	do	400 do	do
5	do	do	500 do	do

This latter figure can be kept up for years to come for our soil is second to none in the island, and our climate is perfection for the endurance and lasting of the tea plant.

The tea abovementioned, runs up to 6,500 feet above sealevel, very nearly as high as any on the Oliphant estate, where the result of cropping for some years has not given so good an average return, we believe. There was some talk of tea of an inferior jât being condemned to be pulled up on this property—a mistake, if committed, we should think—seeing that even the small-leafed hardy China tea is well adapted for high exposed situations, and on Hazelwood, Mr. Rossiter quite expects it to yield up to 400 lb. per acre this year. Farther Eastward in Udapussellawa, we learn that on Goatfell estate tea is doing exceedingly well up to 6,800 feet. We suppose this is about the highest clearing in the island?

Portswood and Tullibodddy (recently purchased), together make for Mr. Grinlinton a compact property in one block of about 500 acres, much of it covered with valuable and promising cinchona. The bark now being harvested is very fine and samples of 'renewed' lately analyzed in London from this estate have yielded splendid results. Tea is however to be freely put out on both places as well as on Messrs. Delmege's Court Lodge estate above, where the cinchona fields protected by blue gums also look very flourishing; the most satisfactory experiment of this kind however in the neighbourhood of Nuwara Eliya is found in the regularly planted fields of cinchona with belts of blue gums on Lover's Leap estate. Altogether as a Cinchona and Tea district, the neighbourhood of Nuwara Eliya and Kandapola, nearly all over 6,000 feet altitude, affords much reason for anticipating goodand permanent results.

YIELD OF TEA AT A HIGH ALTITUDE IN CEYLON.

Abbotsford, 5th Jan. 1885.

Of the 110 acres, 15 acres (the cattle-shed field of which a separate account follows) were pruned in August, 1883; 5 acres (the bungalow field) in February 1884; and 90 acres in March, April and May 1884. None have been touched since. All the prunings were buried and a small amount of cattle-manure, ravine stuff and ashes were added where available. The whole acreage has been once forked during the year, and a second forking is now in progress. If I could spare the labour I would fork three times in the twelve months, as this seems to mean double flush.

As regards the number of picking days, it will be seen that we only availed ourselves of 245 out of a possible 312 week days: this was to avoid Sunday work if possible, and I am certain we have by pursuing this course suffered no loss. We picked two or three times during the year on Saturday because the weather was wet and the leaf would keep till Monday. The figures below do *not* include the tea plucked from our young plants. I mention this as the same doubts were most ungenerously cast upon the Mariawatte yield. The yield of the acreage reported on was for 1883 ... ... 34,293 lb.
against a yield in 1884 of ... ... 55,723 lb.

making an increase in 1884 over 1883 of 21,430 lb. The make for the respective months is as follows:—January, 4,906; February, 8,886; March, 4,458; April, 6 096; May, 3,903*; June, 868*; July, 863*; August, 1,132; September, 2,377; October, 5,182; November, 6,288; December, 10,758. Total 55,723. From the December figures it will be seen that we made at the rate of 97·8 lb. per acre for the month,

* Effect of pruning.

or 1,173·6 lb. per acre for the year, could such a rate be sustained.

Below are the figures for the whole 110 acres:—

ABBOTSFORD TEA ESTATE.

Returns from 110 acres, 7 and 8 years old, January to December 1884. Altitude 4,600 to 6,000 feet above sea. 15 acres unpruned; 95 acres pruned February-June. Rate, 506½ lb. per acre.

No. of Week.	Week ending.	Tea Made.	Total Tea Made.	Average per acre per annm.	Rain-fall.	No. of Days Picking.
1	Jan. 6	811	811	383	02	4
2	,, 13	977	1,788	422	·22	6
3	,, 20	1,050	2,838	447	...	5
4	,, 27	1,100	3,938	475	·20	5
5	Feb. 3	1,262	5,200	491	·17	5
6	,, 10	1,480	6,680	526	·72	5
7	,, 17	1,840	8,520	575	...	5
8	,, 24	3,000	11,520	680	...	5
9	Mar. 2	2,272	13,792	724	...	5
10	,, 9	502	14,294	676	4·59	5
11	,, 16	1,572	15,866	681	·41	5
12	,, 23	990	16,856	664	·56	5
13	,, 30	1,232	18,088	650	·78	4
14	April 6	1,422	19,510	658	·27	5
15	,, 13	1,272	20,782	635	...	4
16	,, 20	1,450	22,232	655	·13	4
17	,, 27	1,840	24,072	669	·54	5
18	May 4	1,280	25,352	665	·43	3
19	,, 11	1,050	26,402	655	1·84	5
20	,, 18	642	27,044	639	3·01	2
21	,, 25	747	27,791	625	·70	5
22	June 1	458	28,249	607	·05	5
23	,, 8	249	28,498	585	·56	5
24	,, 15	251	28,749	566	4·33	3
25	,, 22	201	28,950	547	1·10	5
26	,, 29	131	29,081	528	2·42	4
27	July 6	200	29,281	512	2·44	4
28	,, 13	176	29,457	497	6·66	4
29	,, 20	216	29,673	483	1·52	5
30	,, 27	211	29,884	470	·69	4
31	Aug. 3	124	30,008	457	1·64	5
32	,, 10	212	30,220	446	4·39	5
33	,, 17	149	30,369	434	·68	4
34	,, 24	435	30,804	427	2·90	5
35	,, 31	308	31,112	420	5·20	5
36	Sept. 7	510	31,622	415	1·16	5
37	,, 14	434	32,056	409	2·27	5
38	,, 21	479	32,535	404	3·67	5

No. of Week.	Week ending.	Tea made.	Total Tea Made.	Average per acre per ann.	Rain-fall.	No. of Days Picking.
39	Sept. 28	920	33,455	405	·55	5
40	Oct. 5	131	33·586	397	·73	3
41	„ 12	1,700	35,286	406	1·83	5
42	„ 19	876	36,162	406	7·40	4
43	„ 26	1,004	37,166	408	·78	5
44	Nov. 2	1,511	38.677	415	3·91	5
45	„ 9	1,312	39.989	419	3·59	5
46	„ 16	2,170	42,159	433	2·49	5
47	„ 23	2,076	44,235	442	·03	5
48	„ 30	730	44,965	442	·64	5
49	Dec. 7	2,398	47,363	457	·77	5
50	„ 14	1.606	48,969	463	4·04	5
51	„ 21	1,950	50,919	474	1·30	5
52	„ 28	2.950	53,869	490	·16	5
Three days to end of month	31	1,854	55,723	506½	·53	3
				Total...	85·02	245

In giving separate figures for the 15 acres cattle-shed field, some remarks are necessary. The bushes on this field were pruned in August 1883, and as an experiment have not been pruned since. In 1883 they yielded 425 lb. per acre, and in 1884, without the process of pruning being resorted to, they have given 521 lb. per acre and are still flushing profusely. At the time of pruning all branches were buried, and about 10 acres had cattle-manure and ravine stuff added to the holes. The field has had one forking, and has been picked in 40 rounds, which means as many flushes. Half of the tea on this field is nearly pure China or China hybrid, but a large proportion of the bushes present a broad surface and flush well. We see no necessity therefore for removing this tea (which was sold to us a good hybrid) but our seed-bearers (first class hybrid) are at a distance from this field. About September this got a severe attack of bug and turned quite black in the face, so that for many weeks that delightful maidenly flush that gladdens the manly heart could not be seen. Other-

wise the bushes were in nowise injured, as will be seen from the following details:—

Cattle Shed Field.—15 acres—Jan.-Dec. 1884 (not pruned since August 1883). Rate 521 lb. per acre.

Date.	Round.	Green Leaf.		Made Tea.	Rate per acre per annum.	
						lb.
Jan. 2, 4	i	293				
„ 9, 11	ii	392				
„ 19, 23	iii	504				
„ 28, 30	iv	642	18,31	458		868
Feby. 5, 7	v	614				
„ 13, 14	vi	565				
„ 25, 27	vii	642	1,821	455	918	365
Mar. 6, 7	viii	420				
„ 13, 14	ix	543				
„ 24, 25	x	804				
„ 31, April 1	xi	628	368 / 260	2,135	534	1,447	386
„ 8, 9	xii	588				
„ 17	xiii	650				
„ 23, 24	xiv	476				
„ 30, May 1	xv	886	745 / 141	2,719	680	2,127	425
„ 7	xvi	722				
„ 22, 23	xvii	1,228				
„ 22, 30	xviii	496	2,587	647	2,774	444
June 9	xix	840				
„ 19, 20	xx	410	1,250	312	3,086	411
July 1, 2	xxi	665				
„ 16	xxii	500				
„ 24	xxiii	525	1,690	423	3,509	401
Aug. 4, 5	xxiv	503			3,509	
„ 18	xxv	570				
„ 28, 29	xxvi	431	1,504	376	3,885	388½
Sept. 4, 5	xxvii	437				
„ 12	xxvii	493				
„ 18,19,22	xxix	548	1,478	269	4,254	378
Oct. 6, 7	xxx	1,300				
„ 13, 14	xxxi	636				
„ 20, 21	xxxii	573				
„ 28, 29	xxxiii	992	3,503	876	5,130	410
Nov. 10, 11	xxxiv	2,040				
„ 18, 19	xxxv	1,015				
„ 28	xxxvi	1,342	4,397	1,099	6,229	458
Dec. 1	„	315				
„ 9, 10	xxxvii	1,558				
„ 16, 17	xxxviii	1,300				
„ 23,24,25	xxxix	1,586				
„ 31	xl	1,605	6,364	1,591	7,820	571
		1,657				

It is only right to say that the picking which yielded the average of over 500 per acre, was restricted to the bud, the first developed leaf and half of the second leaf. Mr Thomson of the great London Tea Firm said "If you get 590 per acre of such tea, the yield is very good."

The several thousands of seed-bearers scattered over Abbotsford not a leaf from any of these went into the returns of 1884. recently published. But there are pruned trees along paths and drains, which were plucked. They were, however, estimated for acreage, the space they cover having been over rather than under estimated for extent. The figures for the acreage of seven eight years old tea, which produced 506½ lb. average per acre in 1884, are thus made up, as has frequently been stated:—

Cattle-shed field	15	acres.
Bungalow „	5	„
7 years old „	70	„
	90	„
Add bushes along roads and drains, a liberal estimate	20	„
Total	110	acres,

to which total the returns referred.

Abbotsford, Lindula, 24th Jan. 1884.

I cannot give "Moderation" our average price for last year, as we do not hear of the sale of December's tea till somewhere about April, but I think I can safely say it will not be under 1s 2d. Our average for 1883 was, as I said, 1s 3d. The decrease (if any) for 1884 is not due to the increase of yield, but to a depreciation in prices all round. As "Moderation," in his reference to Loolecondura, rather infers that a higher yield than 350 lb. per acre, must necessarily *distress* the bushes, I give some

figures, that will rather open his eyes, as to what our bushes are doing after giving their 500 lb. last year. Here is this week's work, four days' picking: we had to stop on Thursday as our tea-houses got too full :—

Date.	Pluckers.	Green Leaf. lb.	Average lb. per cooly.	
Jan. 19th	176	3,636	20·65	school children
„ 20th	177	4,552	25·8	went to school at 2 p.m.
„ 21st	184	6,580	35·7	school children
„ 24th	172	6,220	36·16	picked all day.
Total...	709	20;988	29·6	

Fancy 5,250 lb. made tea in four days, and an average per cooly for the week of 29½ lb. leaf! The trees are in splendid condition. The following is a statement of the distribution of the picking for this and last week :—Cattle-shed field, 15 acres, 4,0 8 lb. leaf, 1,002 tea, rate 1202 lb. per acre. Bungalow field. 5 acres, 1,225 lb. leaf, 308 tea, rate 1,109 lb. per acre, Lower estate, 20 acres, 4,490 leaf, 1,122 tea, rate 1,346 lb. per acre. 70 acre field, 13,678 leaf, 2,420 tea, rate 879 lb. per acre. Of course I do not expect, and hardly desire, such a high rate to continue. To show what Tamil women can do when put to it, yesterday 17 coolies brought over 50 lb. each, four brought over 60 lb., one 70, one 73 and one 75! My books are open to any who choose to examine them. As previously stated, our picking consists of the bud and a leaf and a half, and the above 21,000 lb. was almost the finest sample of leaf I have ever got on Abbotsford. —Yours truly,

A. M. FERGUSON, Jr.

"CEYLON AS A FIELD FOR THE INVESTMENT OF CAPITAL AND ENERGY."

We now give a further instalment of the papers written with reference to young men seeking an investment for capital and a career for themselves, through tea-planting in Ceylon :—

CEYLON AND THE POSITION AND PROSPECTS OF ITS PLANTING ENTERPRIZE.

A great deal has been written about Ceylon and yet much remains to be written. The latest work is "Ceylon in 1884," by John Ferguson, and in that brief but excellent little work the reader may find sufficient information to prevent his making mistakes as to its position in the globe and statistics sufficient to enable him to grasp its general condition as a colony.

In writing the present paper, however, it will not be out of place to remind the reader of the position of the island. It is situated between 5° 55′ and 9° 51′ N. lat. and 79° 41′ and 81° 54′ E. long. Its area 15,809,280 acres. Its greatest length is from north to south 266 miles, and greatest width 140 miles from east to west. On reference to the work abovementioned, it is further explained that 2,846,100 acres are cultivated. Lands in private hands equal about 3¾ million, or one-fourth; the remaining three-fourths belong to the Crown.

In 1505 the Portuguese formed settlements on the island, but were dispossessed in the next century by the Dutch. In 1795 the British took possession of the Dutch settlements on the island and annexed them to the Presidency of Madras, but six years after, in 1801, Ceylon was erected into a separate colony.

With this very brief reference to past history, it will be well to turn to the present time with which this review has more to do, as it is my intention to deal with Ceylon as a field for intending colonists,

nd I do not pretend to furnish food for the scientific mind.

Having pointed out the position of the island, it will be well to make a few remarks on the manner in which it is to be reached. In these days of competition the choice is wonderful in its variety and withal a very pleasant journey it is in the proper season of the year. The journey from Britain takes from 21 to 35 days according to circumstances: if the traveller goes with the letters (the convenience or inconvenience of which method was once graphically described in the *Athenæum*) the former; and if by the slowest Canal steamer, or "ditcher," the latter. The most favorable season for leaving England is October —about the middle. By adopting this course no very cold weather is encountered in the northern latitudes, and in journeying south the heat is gradually perceived. The end of October or beginning of November is acknowledged to be the best time for passing the Red Sea—a place having all sorts of imaginary horrors, which Steam the Tyrant has somewhat dispelled. It is true that a leading breeze may make the heat intolerable, but this is a rare occurrence. I have been through this Sea five times, and never felt that there was anything really to be afraid of—and I never once slept on deck. A great deal might be written on the subject of the voyage, but this has been so frequently described that on this occasion the reader will be spared the description of the storm, the fastest time on record and the testimonial to the captain of the vessel.

What an interest there is, though, in these details to the tyro!

On the subject of outfit the same silence may not be so advisable: because it is to the colonist and not the opulent "globe-trotter" that these lines are addressed.

Pray do not think that a list of clothes is going to be given like a washing-book!

All that is required can be very soon described. Two good trunks, two small tin boxes, a large linen bag like a sailor's, a fitted Gladstone bag and a hat-box are the sum-total of the *impedimenta*, and these should contain a good stock of clothes such as would be worn on the hottest day on record in England, flannel of course being the material which predominates. The thousand and-one-suggestions made by one's friends can all be listened to with attention, and like most advice neglected. A large battery of guns is imposing, but a "little Fletcher" will see most men through their sporting career. Many, though very fond of sport, find that it entails too great risks in the way of health and too great expenditure for those whose capital is not available for extraneous purposes. With sportsmen then it is not necessaary to deal, and to them the introduction on landing will not be extended. Are introductions of any use? Certainly if they are given by people well and favorably known and to others of locally equal repute. It is well not to choose *crowned heads* for one's introducers—better to take the lowest seat and rise, than establish at once a reputation for what the Australians call "blowing."

A few good introductions then will be recommended, and with them the whole little European world will soon be open to the new arrival.

What capital is required to start in the island as a planter? This is a question which is always put and one which is very difficult to answer. Lord Denbigh asked the question at a meeting of the Colonial Institute, and the answer may be repeated with advantage and applied at the reader's pleasure. The Chairman said—"I have also been asked that (viz. the amount of capital required for New Zea-

land) a great number of times. I will answer it by one short anecdote. I myself took out two servants. They landed in New Zealand both with wives and families: and when they landed they only had their clothes on their back and eighteenpence in their pockets—that was the whole of their worldly goods I also knew another man, who had £150,000 when he landed in the colony. In result the one who landed with eighteenpence has now an estate worth £40,000; while the gentleman who landed with £150,000 died a pauper. Anybody with brains can do well; and, of course, anybody with brains *and* money can do better than in England; but if a man has neither brains nor money, he had better stay in England, where he will have the work-house to fall back upon."*

Well, the advice which will now be given is this: Bring no capital in your hand, for the inexperienced man with money will be a prey for the unprincipled merchant or planter. Far better will it be for the intending investor to make sure of a supply of money when his experience shall have taught him the right moment to invest and a good opportunity occurs.

Under all circumstances experience should be gained and a good knowledge of the business in which it is intended to embark. It is a dreadful mistake to suppose that anyone can farm, anyone can plant. Look again at the answer Sir Charles Clifford—Chairman of the Colonial Institute meeting—gave Lord Denbigh. Sir Charles Clifford's servants began at the beginning and learnt what they had to do, and in course of time they knew how to apply the knowledge:

* The rule applies more strongly in Ceylon than in New Zealand, where, as the case of Sir Charles Clifford's servants shows, men having only labour as their capital can get on. But in Ceylon, as in all tropical countries, the openings for the profitable employment of European labour are few and far between.—Ed.

the result was success. How very different was the care of the capitalist who plunged doubtless *in medias res*. He had no experience to teach him why one estate or farm or run was better than another. He had to trust to agents and bailiffs; he had no experience of seasons: in fine, no technical knowledge; and he failed miserably and his great capital enriched everyone but himself. And if such instances occur in New Zealand of the fickleness of fortune, it is certainly not peculiar to that country. Ceylon, on the contrary, will compete favourably with any colony under British rule for instances of the vicissitudes of fortune-seekers. It has suffered severely at different times from financial panics.

The *Calcutta Review* for March 1857 cites instances. A property costing £10,000 sold for £350, and another of equal cost for £500. Supposing therefore that a man with capital had arrived a short time before such a crisis and invested without experience, what would have that inexperience cost him?

The same man learning and gaining experience would in course of time have made a fortune. At the present time history repeats itself, and there is a terrible reaction after the inflated prosperity of the decade of which 1874 was the summit level.

I have had some years' experience of the colony, and arrived in it at a time when everyone was quite mad with excitement as to their prospects. There was a coffee "boom," and the scene was not one to forget in a hurry. "In all they undertake they feel the anxiety of a gambler, and not the calmness of a labouring man." This was the state of the Ceylon planter in those days, and nothing can be more hostile to successful agriculture. There seemed a prevalent idea that nothing could be done except at railway speed: acres and acres were planted without any regard being paid to soil, climate, or aspect.

All was feverish haste and intense anxiety to be rich all at once.

In Caird's *Agriculture*, page 531, the reader may find a note on leases, and it is stated that in the 108th Olympiad 345 B. C., the Ænonians used to lease land for 40 years. The terms of the lease are given. In 1874 a planter in Ceylon would have expected to retire on a fortune made from the lease of a coffee estate for 40 months.

Too much could not be adduced to illustrate the utter folly of rash speculation in tropical agriculture. In the *Spectator* of May the 10th, 1884, there is an able article on the Oriental Bank in which the habits of planters are commented upon:—"When a planter has made money, he goes 'home' to spend it, leaving his successor, be it partner, agent, or assignee, to meet all the requirements for wages, new machinery and cultivation, the best way he can, that is, in fact, by borrowing." Supposing the typical English farmer (the gentleman farmer is not included) were to be off to Paris every time he made a good speculation in sheep or got 10 quarters of Rivett's wheat per acre at 50s per quarter (a fact in 1868), would one ever have heard of a farmer making a fortune? or a farm remaining the same for half a century in point of condition? True it is that change is necessary for the European who settles in the East; but the change is not required to that degree in the island of Ceylon that it may be on the larger portion of the Continent of India, or Hindustan. Hence that mania for going home (or for leaving home to speak more correctly) should not exist if the Planter who wishes to prove "that the land be werry honest, whatever you do put into it, you shall get back again." Many, if the truth were known, could date their misfortunes from the evil day when love of their country—sudden and spasmodic!—induced them to break

up and scatter their Lares and Penates and visit their friends in the old country who perhaps would have preferred their room to their company!

What is the best investment in Ceylon at the present time?

Tea undoubtedly, but it is a product which has only lately come into notice. In 1867 there were 10 acres in the island, and in 1877 the acreage had risen to 2,720. In 1883 there were 32,000! And now there is a rush and tea is being planted everywhere. It is a wonderful success in many places, and it can be extended still farther. Land can be obtained at the upset price of R10 per acre. Survey and other fees added in some cases as much as 30 per cent. Old coffee estates—abandoned wholly or partly—can be bought very cheaply and planted up. The yield of some of the best bearing estates is very large—as much as 1,000 lb. of prepared tea per acre. Elevation seems to make but little difference, for estates at sea-level and estates at 6,000 feet above it have made equally high prices for prepared tea. The labour question at present gives no anxiety, and tea estates are sought after on account of the regularity of the work. There is an abundance of seed of fair jât in the island which can be obtained at moderate prices.

There has not yet been any speculation in tea estates, but the time may come, and the happy possessor of an estate may find a good sale. The whole of the Central Province or mountain zone is suitable in climate for tea and the insular climate is a great advantage. Again at a time when the fruit-grower is crying out at the cessation of his trees from bearing, a product is introduced which is cultivated for the leaf only. Post-fact wiseacres have remarked that tea was the proper product for Ceylon and not coffee. The best known estate, it must be borne in mind, has peculiar advantages. It is close to a rail-

way station, close to a town, and has a cart-road (Government) right through it. Compare these advantages with the disadvantages of an estate in a more remote part of the island—say the Badulla district —where there is no railway, labour not too plentiful, and 125 miles of road to be traversed to Colombo.

Nevertheless, if a yield of 800 to 1,000 lb. per acre can be obtained saleable at 1s sterling per lb., a fair profit can be looked for even under considerable disadvantages.

The planting of a tea estate can be done by a coffee planter of experience, and the art of tea manufacturing is now well understood by many, and has been brought in some instances to approximate perfection. If therefore the intending investor were very anxious to commence operations at once, he could live on an estate whilst the planting operations were going on and learn this work, and afterwards whilst the tea was growing, go and learn the art of preparation for the London market. In this way the first three years of proprietorship could be profitably spent and the realization of profits rendered all the sweeter by an intimate acquaintance with the cause and effect.

It is highly improbable that any tables of estimates would be understood by the tyro, and therefore figures which prove anything will be avoided; but briefly to give some idea of how capital would be expended is only reasonably to be expected.

First then let us take the case of an old coffee estate. An estate of 640 acres or a square mile of land is purchased, say for R20,000, or, to make it clearer, £1,660. On this there would be a bungalow, a good store with water-wheel and machinery, and ample accommodation for the cooly labour. There then might be 300 acres of coffee, good, bad and indifferent; 20 acres of cinchona, some good forest and some chena or second growth of jungle or land once opened. The annual

expenditure on such a place would be, say, £1,200 and crop value of coffee and cinchona £1,440. The coffee crop being 400 cwt. and the cinchona about 2 tons, a profit of £240 would be left with which to plant tea, and the cost would be about R50 to R60 per acre. (The rupee is estimated at 1s 8d.) The weeding and all expenditure on roads and drains for upkeep would be found in the estimated cost of maintaining the declining coffee estate: hence the capital required for such an undertaking would be £2,000 to £3,000, and the proprietor should be perfectly free under such conditions from all agents and mortgagees.

Having finished with the last favorite, I will now proceed to touch upon the last but one, viz., CINCHONA. This product was in great favour a short time ago, until it was discovered that it did *not* flourish, like Horniman's tea, always good alike. On reference to Ferguson's Directory it will be seen that the product was known a long time ago, but during the halcyon days of coffee little attention was paid to it. A well-known instance is quoted of the fabulous prices realized by sales of bark in the early days—that is to say, up to 1880. Ten shillings and two-pence per lb. was obtained for cinchona officinalis quill bark. But space will not admit of going in for all these details and statistics: they may all be found in that marvel of compilation, the said Ferguson's Directory. The subject now before us is the present position of the enterprize. To deal with this, we must leave alone isolated nstances of great profits and take the market value of the unit of sulphate of quinine on which to base our calculations.

Before, however, looking at the financial success of the product it should be viewed agriculturally.

I quote a sale of a cinchona estate which has just taken place to show how bargains can be picked

up. The estate was the Tullibody estate near Nuwara Eliya and the price paid was R13,000 or £1,000 sterling at present rates of exchange. The estate was thus described in the local papers :— "248 acres more or less—65,000 trees from 9 months to 7 years old. Buildings consisted of a bungalow, store and cooly habitations. The estate was well drained and 'admirably suited for the cultivation of tea.'"

Circumstances alter cases; but there must be some very peculiar circumstances about this estate if it be not a case of a bargain. For my own part, I would rather have a plantation at Awisawella or Kalutara, two lowcountry places, than live at the high elevation of Nuwara Eliya, where one encounters the one thing to avoid in a tropical country, namely, cold! My first experience of the place was in Christmas 1875, when I ascended Pidurutalagala, the highest point in Ceylon, and felt such a chill as I shall not forget My companion, an old gentleman, got congestion of the liver from it. There were frost and ice on the puddles in the road, *jam satis terris*, &c. I came to avoid cold, and here I was in the zenith of the Christmas Father's glory. I do not recommend Nuwara Eliya and its neighbourhood.

Of course, it must be thoroughly understood that the typical estate is one that has been forced into the market in times of great depression, for it might be truthfully said that a practical planter who so sacrificed a good concern would be a fool. The picture is not altogether overdrawn.

Where can cinchona be grown? For my part, I am prejudiced in favour of a certain district; but I do not fear contradiction when I say that it cannot be grown in clay. When the product was looked upon as a means of evading ruin it was the fashion, wherever a bare ridge or patch of vacancies was seen in the coffee and elicited criticism, to

say: "Oh! plant it up with cinchona" (and to realise the full weight of this you must pronounce the word with a Scotch accent). Time proved however that this was as great a mistake as the indiscriminate selection of land for coffee. When there were a few planters and a few coffee estates, men of experience used to select good land, but when the rush came, people sought the flimsiest excuses for making out that land was suitable. A well-known visiting agent,—an itinerant land agent—used to say to me when I first came to the country, 'good soil' or 'good climate' of nearly every estate that I asked him about. Now as it is notorious that the soil of Ceylon is not generally good, this was peculiar to say the least, and did not argue in favour of the gentleman's good sense.

Cinchona requires a soil with a good mixture of stone and sand or quartz. Heavy moist soil does not suit, nor slab rock; and a field that I know has apparently nothing but quartz, but here the plant seems quite in its element.

And as to climate. A dry climate is the best, and this is found on the eastern side of the mountain zone. The critical time, viz., the age of three years, can here be passed safely, and one may look for trees of a great age comparatively speaking. The present fashion is to spokeshave the bark off the trees and after the first operation, wait 9 to 12 months and repeat it. The first is the original bark and the second the renewed, of commerce. I will give an instance of what the cinchona succirubra will do. Original shavings off 5½ acres weighed 1,500 lb. and analyzed 1·65 sulphate of quinine, the renewed off the same acreage weighed 2,000 lb. and analyzed 3·31 sulphate of quinine. The trees are still standing and the bark has renewed very well the *third* time. In the first instance the bark would be worth 8d per lb. and the second 1s 4d, so that

the gross proceeds (with unit at 25 cents currency or 5d) would have been 1st year £50, and second year £130—the actual results were much better than this. The cost of harvesting may be put at 2d per lb. I should not recommend shaving any tree under three years old, and indeed it would require that soil and climate were all in favor of the plant's growth to shave at so early an age. At four years old the operation may be considered safe, and the tree sometimes seems to thicken and grow after it. Great care is necessary however not to injure the 'cambium.'

Most people know how to destroy trees by 'ringing' the bark, and if the actual wood is exposed the operations of shaving and ringing are synonymous. After the second shaving it will be well to coppice, and in so doing cut off the trees leaving a good slope on the stump—suckers soon spring up, and two or three will grow to a great size from the one stump. I have suckers growing in this manner that are equal in size and strength to a stem of the same age from an original plant.

A cinchona estate arrived at the age of three years old from jungle would be rather costly, because buildings would be required, with the exception of store, to the same extent as a small coffee estate. A bark store would be necessary.

Roughly speaking I would not recommend a smaller capital than £2,000 for an estate of 100 to 150 acres. Of course, as in entry on a farm, the whole amount is not immediately necessary; but whereas the harvest would come in a year, say, on a Michaelmas entry; in the cinchona estate it would be delayed for three. In the first year all the planting operations would be done, the buildings put up at least for the labourers, and subsequently, weeding and improvements and supplying losses of plants by death and insect enemies. Handbooks on the cultivation

are written, and in these all the details will be found. It is just possible that the proprietor might arrange to live with a neighbour if there was one near the jungle and so the erection of a bungalow could be delayed until he saw that his "agricultural venture was a financial success."

But some one will say: "How long is this cinchona plantation going to last that you talk of buildings and bungalows?" I reply that if it be a success it will last quite long enough for its owner to spend his capital and get a very fair return for it: after that perhaps he may wish to enter upon some other speculation. Three years before harvest and three years of harvesting are ample time for a man to decide whether he will remain in his voluntary exile, and ample time for him to "spoil a horn or make a spoon." I do not think a cinchona plantation would last for ever, nor any cultivation in the tropics that meets the approval of the European. If he means to spend his life in a climate admittedly unsuitable to the European constitution—and in many cases made so fatal by utter want of commonsense in personal habits—he should plant cocoanuts, nutmegs, or buy paddy (rice) fields, and live as abstemiously as a high-caste Hindu. Cinnamon, too, is a good lasting investment, and has enriched more people than any spice the white man has grown. There are so many drawbacks to all these products that it is scarcely necessary to mention them except in the way I have done. The European planter as a rule has in his mind's eye large profits and quick returns and will not wait for a slow but sure concern.

But to return to Cinchona. In it as in tea there is no fruit, no blossoming season, which have of late years given the poor coffee planters so much anxiety, but in contraposition the uncertainty of the market value may be placed. If it be true that present prices only remain as they are on account

of the large sums lent on the stocks of bark, then I fear that there is a bad time coming for the cinchona planter, but if increased consumption (owing to the price of the manufactured article being low enough to place it within reach of the million) continue, then 5d per unit will make the planter a profit, and every 1d above that will lighten his anxiety and increase the weight of his purse. Prices are now rising. I feel that to enter deeper in detail and mention the varieties of cinchona,—all household words to the experienced planter,—is here out of place, so I dismiss the subject of cinchona and will proceed to coffee.

At the commencement of this subject I fancy I see the pessimist who

> "beheld their plight
> And to his mates thus in derision called"

at the bare idea of a man writing about coffee in these days! Laugh and deride, Mr. Pessimist, Mr. Merchant, or whoever you may be: but perhaps you have not much to laugh at. You had not the money to invest in the year 1874, before alluded to, and now take credit for perspicience. Or, you recklessly risked your own and other people's money in 1874, and now regard yourself as a special subject for compassion—one who has received no Providence. Yes, I know well the ways of the 'turn-coats'! "Ruined, eh?" "Yes; but, has coffee ruined you"? "No, but leaf-disease (*Hemileia vastatrix*) has." "Has leaf-disease killed your coffee?" "No, but it has spoilt the crops, and there was no money for cultivation, so it *snuffed out.*" "What became of all your large profits when coffee paid well say from 1869 to 1876? Was there no leaf-disease then?" "I thought the large profits were going on for ever: indeed some said coffee would go up to 200s per cwt., so I spent them. Yes, there was leaf-disease, but manure and cultivation seemed

to keep it from being very bad." "And could you not get any credit for working your estate, if not expensively in such a manner that you would be ready for a good season if it came?" "Well, no, I was pretty heavily mortgaged, and my agents would not allow a cent beyond what paid from the mortgagee's point of view." "So your coffee after being highly cultivated and stimulated was starved eh?" "Yes, I suppose it was?" "And have none cultivated their coffee since these hard times came?" "Oh, yes, a few I believe." "And in what condition are these estates—'snuffed out'?" "No, I believe the other day there was a case of an estate cultivated well, being much admired by the mortgagee or an agent, and he said that he should not think of turning out the mortgagor." "Then it is possible to cultivate coffee to a profit even with short crops and low prices." "Well, I am out of it, so I cannot give you my experience; but I suppose if it were not —— and —— and —— & Co. would have shut up shop long ago. They, are all heavily mortgaged, and if they did not pay would be sold up; so there must be the interest that they have to pay above and beyond working expenses allowed." "What about a proprietor who is free of all mortgages, cannot he make a good coffee estate pay, for I suppose a bad coffee estate would be just as great a loss as a bad farm or a bad horse?" "Yes, I suppose he might show a profit over working expenses, but he would not be able to show anything like a fair interest for his money, if he bought in 1874 at the then market rate." "Exactly, but in the latter emergency he is not different from many capitalists who invested in land in England about 1870. Land was then bought to pay about the same interest as consols at 92½, and rents have now fallen so low that perhaps it only pays about 1 per cent or so."

I will not prolong the conversation, but I do

not hesitate to say that a great deal of the depression now being experienced is owing to human folly and not divine intervention. My own feeling was when I first came to the island that perhaps if I were fortunate I would obtain double the interest for money that I should get in the old country, but of course there was more than double the risk. At first I was very cautious, and would not accept the off-hand representations of huge profits which were given to me. But at last I doubted my own judgment and listened to crafty people and "plunged," with the result that I have learned a very bitter lesson. I did not do as I have advised. I invested before I had gained experience, and others made money while I lost the capital which I introduced. Like many others I had something good and something bad, and the bad was always dragging me down. At last I cut the Gordian knot and let it drift at a ruinous sacrifice, and now am free to speak of only the good. I believe that besides a living I can make a small profit over working expenses, though of course I cannot get even a fair interest for the capital invested. Crops, too, have steadily gone down and now seem to have found a level at about two to three hundred, weight per acre which at present prices leaves little margin of profit. That this average of crop could be raised by judicious cultivation I do not doubt, having very good authority for the assumption; but there are historical reasons for the cultivation being denied to the suffering plant, and therefore things remain *in statu quo*. I do not suppose that you would find a single person so bold as to say that they would still depend on coffee planting to make them a living. Perhaps they may be right if they are thinking of the old districts known as the Kandy side; but in Uva or the eastern portion of the Central Province beyond Nuwara Eliya and looking towards Batticaloa and Hambantota the case is

different. Here soil and climate have rendered the struggle of the coffee against adverse seasons and disease and neglect prolonged, and should succour come now in the shape of Government recognition of the requisitions of the coffee planter, I believe that these districts might still flourish and be profitable in this product alone to their proprietors. Having had experience in agriculture I know that it is not every one that can farm successfully, and pitchforking money into the land does not constitute good farming. There was a time (in the early days) doubtless when a man could hardly fail to succeed in coffee planting because the demand for plantations was not great and there was plenty of land to select from. The best land got taken up and then when a rush came, people went in for the second best and so on until there ceased to be any good, better, or best left, and land was opened, which the old pioneers would have shunned like the plague. Besides this a vast area was opened and a late Governor remarked that in no country in which he had been, had he ever seen such general devastation of forest as in some of the new coffee districts of Ceylon. Is it a matter of surprize then that a number of years of great fertility should be succeeded comparatively by a few years of sterility? The farmer in North America has a large quantity of land to select from, and he sows his seed in virgin soil; when he has got a crop from one piece of land he goes on to another, the soil is there and no exhaustion has yet taken place. In like manner in Ceylon. From what I have heard even this deep virgin soil in America will not crop year after year without cultivation or rotation of crop; and in Ceylon the one crop was perpetual and no change was made. And the same land was always cropped, coffee being never replanted as in some countries, Java for instance.

A blight came on the coffee in 1869, followed by

the unprecedented prices in 1870-80. Whilst these high prices continued manure was put into the land without stint and without method. Everything was done to force the crop. When the coffee plant became keenly susceptible of stimulants, they suddenly ceased on account of a fall in prices and a withdrawal of the confidence of the capitalists.

The coffee seems to be less to blame than its treatment.

A farmer never knows his business, and the seasons he admits beat him. The coffee planter expects to learn his business in a few short years, and rarely studies the seasons. The cultivation went on in the old jog-trot style, and it was only with a rise of prices that innovations came, and with these entirely inexperienced men.

Coffee then is under a cloud, and it will be almost useless to waste more time in describing the land suitable for it, because there is none left. It will be useless to describe the manner or cost of planting, because no one would have faith enough to plant it if he had suitable land it will be useless to describe or estimate the profits, because the crops do not come. But—and there is always a "but" in every case—I should advise any possessor of good coffee to stick to it and do all his purse will allow to preserve it against a possible return of favourable seasons and the departure of leaf-disease. In conclusion, I am told that there are many worse places than Ceylon, by one who has been round the globe, and I can quite believe it. I have a great friend, with whom I lived in Ceylon; he is now in the Far West. He described to me that his prospects were to become a fairly good agricultural labourer. He had, after some months' residence, a few acres of grain, potatoes and onions. He and his brother were then quite alone, and after his experience of an abundance of native servants and cooly labourers this must

have been very trying. Yes, I should be inclined to say that for a gentleman who has from £2,000 to £5,000 capital to invest he might do worse than come to Ceylon. "*Spectatum veniunt, veniunt spectentur ut ipsi,*" will be a good rule however, and if the inspection is unsatisfactory do not go further. If it be very satisfactory do not fail to make it long enough to verify first impressions. There are few hardships in the country. Provided that you have plenty of Tamil or Sinhalese labourers for transport and a little money, there is scarcely any necessary you need be long in want of. Colombo is one of the finest towns in the East. Kandy, besides being well supplied in every way with comforts for Europeans, is one of the prettiest. Badulla is a very good specimen of an outstation; and besides these there are Matale, Gampola and Nawalapitiya that may rank as quite civilized places. Nuwara Eliya, the hill sanatorium, and on the Badulla side Haldummulla, Passara and Lunugala, all with post offices and regular daily mails. Telegraph offices at all the principal towns, good English and native shops, mails every week from England, steamers going and coming almost daily to and from east and west,—all this makes life worth living.

There is plenty of good food to be had;—it is the fashion to run down the beef sometimes, but you cannot expect "Welsh-runts*" in Taprobane,—and very cheap it is! A single man can live very comfortably on £200 per annum and need not owe a single bill. Horses are fairly cheap and horsekeep is not more than £3 per month. Of course all imported articles are dear and just about 100 per cent over cost price in England, *i.e.*, what costs 1s in England costs R1 here; but allowing for exchange this would not be cent per cent. Nevertheless, the calculation is near enough without splitting straws.

* Some of the finest beef extant.

As for health, in the hills the matter lies almost entirely within the power of the resident; and in these days of moderate drinking and almost complete absence of beer one may enjoy as good health as in one's native village in England. Plenty of exercise, plenty of flannel ("white things" I abhor!), care about the sun and sobriety are the main points.

To all who read these remarks I would say: "Come and see the place, and if you do not like it there will be no harm done, only a few pounds gone in a pleasant voyage! I for one will give you a welcome and any information that lies in my power."

Dec. 31st, 1884. A. C. I.

BOYHOOD THE HAPPIEST TIME OF LIFE—CEYLON IN OLD DAYS: ITS CONQUEST BY THE BRITISH—THE ROAD TO KANDY: HOW IT WAS MADE AND ITS EFFECT ON THE REVENUE OF THE ISLAND—THE RISE AND FALL OF THE COFFEE INDUSTRY—THE RUIN CAUSED BY LEAF-DISEASE NOT CONFINED TO THE EUROPEAN COMMUNITY—NEW PRODUCTS—THE NEW KING, TEA: ITS UBIQUITY OF GROWTH—DANGERS OF HURRY—ADVANTAGES ENJOYED BY CEYLON TEA PLANTERS—LIKELIHOOD OF A FALL IN PRICES—COST OF PRODUCTION—THE BEST TEA SOIL—CHOICE OF PLANTS—HYBRIDS—NEW AND OLD LAND—ELEVATION AND RAINFALL—COST OF OPENING A TEA ESTATE OF 100 ACRES—PROFITS—A HEALTHY CLIMATE—THE CEYLON PLANTERS—DISTRICT ASSOCIATIONS.

My dear Mac D———,—Your letter came duly to hand, and I was at first a little excited about how you discovered my address, but I suppose you came across Ferguson's Directory, which travels far and wide over the face of the earth, or perhaps you may have met with one of the few old planters who

may have known me in other days. I never was a very conspicuous person, but for the last dozen years nothing could be more obscure than my existence. You remind me of those winter evenings 51 years ago, when some little assistance old Mrs. Mackay solicited for her grandson, in getting up his lessons, led to the nightly gathering of half-a-dozen boys round me, to be coached in the questions the dominie was likely to ask next day, and then we indemnified ourselves with much fun and frolic for our hour of study. I have often thought that the days of boyhood, say from ten to fifteen, are the only real good times that life has to offer.

You wish me to give you my opinion of the Ceylon of today as a field of life work for a young man of twenty with fair talents tolerably cultivated, and who can command a capital of £2,000, two or three years hence if the life and work should be satisfactory.

The Ceylon of today is very greatly changed from the Ceylon that I first set foot in forty-four years ago. The Ceylon of that day was one of the poorest countries on the face of the earth. It had been conquered from the Dutch in 1796, and was kept by Britain at the peace, because it was not desirable that any foreign nation should have a footing so near our Indian Empire. A large garrison was maintained chiefly at the cost of England, and in 1815, the whole island was brought under British rule by the conquest of the Kandyan kingdom, which added something to the strength if not to the wealth of the Government. It was for the more secure military occupation of the new conquest that a road was run into the centre of the mountain zone. The Government of those days was not rich enough to have made twenty miles of carriage road in any direction on the system that now obtains; but it had inherited from the native rulers an unlimited right of corvee,

and by this custom all the unskilled labour required for the construction of the skilfully planned system of roads was supplied. Else it is not easy to see how the island could ever have become other than it had been for a thousand years, a land of forests and swamps inhabited by an indolent apathetic race, living from hand to mouth, decimated by famines from time to time, and keeping population in check by the practice of polyandry and female infanticide. In the towns on the sea coast, there was a mixture of other races, European descendants, half-caste Moors, Tamils, &c., and there alone the scanty capital of the island was concentrated, and the small trade transacted. A man who could give his daughter one hundred dollars, say £7 10s, as her marriage portion was held to be in prosperous circumstances, and he who gave two hundred was called rich.

The public revenue in such a country was of necessity rather limited and consisted of a monopoly of the production of cinnamon, a salt monopoly, a tithe on the grain grown, a customs duty on the small import trade, and a few other small imposts, which with a pearl fishery at long intervals made up an average of something over R3,000,000.

It was into this state of affairs that the existence of a road into the central districts brought Europeans with money in their pockets, and in native opinion a mad desire to get rid of it. I do not propose to go into the history of coffee planting in the island, the capital and the lives it wasted, its see-saws of depression and prosperity till the great disaster that in ten years has reduced the production to one-fourth of the amount it once reached and in its fall has carried ruin into industrial pursuits that it created and supported. *Hemileia vastatrix* has not only ruined coffee planting but everything that even remotely depended on it. Except the purely native element that has lived its own life apart in the obscure vill-

ages unaffected by the changes that went on outside its economy as inherited through fifty generations of unenterprizing ancestors, and a less numerous but more important section of natives who made money when they had the chance and invested it in cocoanuts, cinnamon and other enterprizes that can now stand alone and save the country from ever falling back into the poverty-stricken, dead-alive state of half-a century ago, even had European planting become a thing of the past, which was greatly desiderated by some members of the public service, but is not likely to come to pass yet awhile. The planters have fought their battle like a band of heroes. No sooner had the serious nature of the fungus become suspected than they began to plant all kinds of new products suitable to their respective climates, and that promised to pay for the cultivation, cinchona, Liberian coffee, cacao, cardamoms, rubber and tea.

On this last planters have taken their stand, and have elected it king instead of the moribund coffee-tree. It is asserted that this plant grows luxuriantly over more than one third of the surface of the island and from the sea-shore up to 7,000 feet, that it will pay to grow it on indifferent soil, but that in the most favoured spots unprecedented crops have been produced already, 900 lb. per acre and more expected when the bushes are more mature, but no one seems to doubt that 400 lb. is to be got got off almost any land, and that with proper machinery it can be put into the London market for 6d per pound, where it has already made a place for itself, inferior to none. While such are the opinions generally held by Ceylon planters, you may be sure they are not idly contemplating possibilities but rapidly carrying their theories into practice, and tea plants are being put down by tens of millions. For good or for evil, Ceylon has committed itself to tea, and a great tea country it will

become : nothing will hold them back now, though I and others may howl ourselves hoarse, shouting *festina lente*. There would not be much to regret in this movement were it not that bad jât may result from the hurry, and the vast demand for labour may soon outrun the supply, and permanently increase wages without estates being thereby fully manned.

The present advantages of the Ceylon tea producers are a forcing climate, a railway that penetrates to the heart of the mountain zone, good cart roads into nearly every important district, a tolerably abundant and not prohibitively costly supply of labour—but it is said that competition is beginning to tell in what has hitherto been Ceylon's preserve ; and we are quite willing to believe that our average per acre will exceed that of our Indian brethren by twenty-five per cent. The only one of those advantages that has the elements of permanency about it is the climate that gives a tea harvest all the year round. In a few years India will match us in means of communication, while increased competition and cheap and rapid means of travel will tend to equalize wages all over India and Ceylon. By the time Ceylon sends her fifty or sixty millions of pounds of tea annually into the markets of the world consumption will not be able to overtake supply and a time of low prices will ensue, through which only the fittest will survive, namely, those who can give the finest qualities at the lowest cost of production.

It is most probable that here in Ceylon, where the most perfect machinery yet invented is in use, the lowest cost of production has been reached and we may take it as an established fact that it can never be produced at a lower rate in future, as the undoubted tendency of the age in this part of the world is towards a rise in the wages of labour as new industries open up new fields of employment and the condition of the labouring population improves with larger means.

The best tea soil is a deep permeable loam, the richer in the common elements of fertility the better. As the soil falls off, either towards stiff clay or hungry gravel, the growth becomes less and less rapid and vigorous, yet tea will grow tolerably on soils that few other useful plants would relish. The most important point in the establishment of a tea field is the choice of plants. We have borrowed the word jât from India and speak of a good or bad jât according as it approaches to our ideal of what a tea bush ought to be. The tea plant is indigenous in the forests of Assam, and though it has been cultivated in China from time immemorial it is probably not indigenous in that country, and the forest tree of Assam and the cultivated shrub of China are specifically the same. When the two varieties were planted together the seed of either produced varieties without end. There is no hybridizing in the process but only what takes place in the case of all other plants that run to varieties. We have learned to call the plants we want to cultivate Assam hybrid, but instead of one hybrid we have a score of types and even within these no two plants are exactly alike in the size, form, colour and serrate of the leaf or in the habit of growth. Many of the inferior sorts are unfit for cultivation and should be treated as weeds as soon as they declare themselves and their place supplied with better jât. The seed should be taken from the very best jât, but this even will not be safe if an inferior jât be allowed to flower at the same time within a bee flight.

I do not know what set me on about jât, which can be of very little interest to you, but as it is written I let it stand. If your grandson should finally decide on tea planting he will learn that and other things connected with the business best on the spot.

A large proportion of the tea already planted is on old coffee land, and there are plenty of old estates in

the market, but for a young man proposing to settle new land is what I would recommend. The Government upset price is R10 per acre, but all choice lots are in future likely to be competed for, and it is hard to fix a probable price, but lower qualities outside the coconut region may generally be had for the upset price. If I were going in for tea on my own account I would prefer lots over 1,500 feet above sea level, as you are more likely to get regular rain than at a lower elevation, and frequent rain is a necessary element in successful t a growing.

In the part of the country I reside in there remains no Government land. but at the current rate of labour a tea estate of 100 acres could be established up to the plucking period with everything but machinery complete for £1,500. The establishment of suitable machinery would leave little of another £500, so that £2,000 of capital would be necessary for the purpose. We count here in rupees, and the rupee is equal to 1s 7½d more or less.

For the returns from the property so established we will only estimate 300 pounds per acre, costing £10 and selling for 1s per pound all round, £15 being a return of 25 per cent on the capital. I cannot say what the same extent might cost elsewhere, and under other circumstances. I have taken a low yield compared with what has been achieved in other districts, 600 lb. per acre having been obtained at an elevation of from 5,000 to 6,000 feet and from 800 to 900 lb. on choice spots from 2,000 to 3 000.

There is perhaps no part of the world more healthy than the tea region of Ceylon : some authorities even assert that some of the mountain districts possess the finest climate in the world

It is an easy journey of ten hours from Colombo to Nuwara Eliya, the highest town in the island, where frosty mornings are common in the season and with the exception of the outlying province of

Uva any of the planting districts may be reached in one day from Colombo.

Among the planters of Ceylon there is a large proportion of exceptionally able men, and the whole body form a well informed and highly intelligent class, now pretty generally turned into conventional subjection by the presence of many ladies. In all the large districts there are Associations that meet periodically to discuss local matters and bully the Government, a duty they perform with more energy than effect, for, "your dull ass will not mend his pace for beating." L.

How a Coffee Plantation has Paid its Way in a Poor Part of a High District, in Ceylon, in spite of Leaf Disease, Poor Prices and General Depression.

You ask me to tell you the story of "How we kept our wattie." I cannot give you full particulars, because, if I did so, my partner might not like it; and a good partner is not to be sacrificed to satisfy the cravings of an inquisitive public.

I think one of the chief elements in our successful attempt to hold our own over a space of 12 years was our being mutually blessed (ahem!) with cautious prudent partners who would not contract a debt greater than they could pay off with funds available elsewhere.

A good soil for coffee and a climate suitable for this peculiar tree were not what kept the wolf from our door; for the elevation was over 4,000 feet; the climate decidedly wet, say 180 inches, if not more S. W. exposure; and the plants in nursery were covered with leaf-fungus. I question if there could have been a poorer investment as a coffee estate pure and simple. I don't think we ever averaged more than 2 cwt., and we often tumbled down to ½ a cwt. We did not spend much on buildings. I think bungalow, lines and stores did not cost more

than R4,000. We wasted about R6,000 in manure. We roaded and drained the estate very effectively.

Cinchona has done not so badly however; officinalis very poor; but the plain but honest succirubra has certainly done us a good turn.

The superintendence averaged R2,000 per annum for a little over 200 acres—given to others. If we had worked our own property, that would have been an income very few farmers in England or elsewhere would have got out of 200 acres.

To sum up, the estate stands us at £3,000 sterling. We have 80 acres of good cinchona, which, if harvested, in the next year, should give us £2,000 worth of bark, and we have this land for tea. We have 110 acres of good land planted with tea from 1 to 3 years old most promising, and about 30 acres of not so bad coffee that will last for two or three years yet, if we do not find tea a more profitable investment. The conclusion I at any rate have come to is that I would not part with the property for £6,000, should any of those Tea Company gentlemen offer "cash down." Why should we? I think we have found the products that will give us paying returns. We were very despondent about 18 months ago. We are now chirpy.

Ceylon property, if the proper product is grown in it and, if judiciously and carefully managed, will hold its own with that of any other country, and what a place it is to be here. A really temperate climate, only three weeks distant from England by P. & O., but will be only that time's distance from the dear old country when the first "ditcher" really does her best. The passage to London and back will soon be R500. I shall be able to harvest my tea and go home and square up with my London agents for four months every year if so disposed.

Ceylon gone? Never a bit! We have a shot in the locker yet, and her Planters have the stuff in them that command success. FLOREAT LANKA.

NEW PRODUCTS IN CEYLON:

ESTIMATES OF COST AND YIELD FROM PLANTATIONS.

We append Estimates in connection with the principal Planting Products cultivated in Ceylon. For fuller and practical information as to mode of cultivation, &c., we refer to the *Manuals* from which our quotations are taken, as well as to the various other indispensable publications for planters issued from the *Ceylon Observer* Press, more especially the monthly *Tropical Agriculturist*.

ESTIMATES.

TEA.

(*From "Tea Cultivation in Ceylon" by C. Spearman Armstrong.**)

Take for example a "garden" of 150 acres, bearing at the rate of 400 lb. (of made tea) per acre:

	cents
Supt., including Factory overseer, at R20 per acre, cost per lb. of tea	5·000
Weeding at 87 cents per acre R10·44 per acre per annum	2·610
An ordinary pruning at R6 per acre	1·500
Nurseries R225 ... ... } ... ... {	·375
Supplying at R4·50 per acre } ... ... {	1·125
Roads and Drains at R3 per acre	·750
Tools, say R150	·250
Transport of Tea from estate f. o. b.	2·200
General Transport	·400
House and Tappal coolies, medicines, stationery, contingencies, and export duty and medical aid	1·540
Upkeep of building at R450 per annum ...	·750
Manuring 30 acres per annum at R100=R3,000	5·000
Total estate expenditure per lb.	21·500
Add for cost of plucking and manufacture ...	17·500
Total cost 400 lb. per acre f. o. b. at per lb. tea *hand*-made	39 cents

Value of 400 lb. tea at 60 cents per lb. *nett*	R240
Less cost as above at 39 cents per lb.	156
Nett profit per acre	R84

Or if no manuring is done R104 per acre profit. Manure of course eventually pays for itself by *increased* yield. [The yield on Ceylon plantations in 1884 ran up to 1000 lb. per acre in one or two cases, so that 400 lb. should be safe.—COMPILERS.]

* Revised Edition published by A. M. & J. Ferguson, Colombo, 1884.

CACAO.

(*From Estimates and Remarks by a Practical Planter.**)

Estimates for opening and bringing a Cacao Estate of 200 acres into bearing, including cost of land.

Probable cost of 200 acres of land at R25			R5,000
1ST Year from January to 30th June of following year.			
Felling and clearing 200 acres at R15			R3,000
Nurseries: clearing sites	...	... 40	
80,000 baskets at R5·50	...	... 440	
5,000 cacao nuts at R55			275

☞ TEA: It will be observed that the estimate we give of Mr Armstong's is for *hand-made* tea: where improved machinery is in use, the cost is reduced from 39 cents to 32·68 cents per lb.

Since these estimates were framed, the results of further experience by Messrs. H. K. Rutherford, A. E. Scovell and C. S. Armstrong have been published. Mr. Rutherford's experience over four gardens with 2½ million pounds green leaf from trees 1¾ to 6½ years old, shews a result 6 cents per lb. above Mr. Armstrong's for the work between plucking and shipping, and the experience of Mr. A. E. Scovell on Strathellie closely agrees with that of Mr. Rutherford at 17·60 to 17·72 cents for the total cost of manufacture f.o.b. Colombo against Mr. Armstrong's 11·16 cents. On the other hand, during the present season (1884-85) we have several gardens in bearing in Ceylon from which full crops of tea are estimated to be produced at from 26 to 28½ cents per lb. for total expenditure to f.o.b. against the 32·68 cents which is Mr. Armstrong's minimum; and it is expected that from good gardens, when all is in proper working order, the cost of Ceylon tea will only be 25 cents (4 annas, or the equivalent of 4¼d per lb.) on board ship at Colombo.

Nurseries and supplying	...	...	2,400
Weeding at R1	...	...	400
Roads: upkeep and culverts	...	...	200
Drains upkeep	...	...	100
Pruning and singling	...	...	800
Staking at R4	...	...	3,000
Buildings: bungalow and furniture		...	500
Contingencies	...	...	3,000
Superintendence and allowances	...	...	
			R10,750

* Published by A. M. & J. Ferguson, Colombo.

CACAO.—(*continued.*)

3RD YEAR from 1st July to 30th June.

Nurseries and supplying			R150
Weeding at R1			2,400
Roads: upkeep and widening out 3 miles into cart road with 10 feet			800
Drains upkeep			200
Pruning and suckering			300
Staking, retying, etc			100
Building: temporary curing-house with stores and fan	500		
Permanent set of lines	700		
		1,200	
Gathering, curing and dispatch of 200 cwt. at R6			1,200
Contingencies, including watchers ...			900
Superintendence and allowances... ...			3,000
			R10,250

4TH YEAR from 1st July to 30th June.

Weeding at R1			R2,400
Pruning and suckering			400
Roads upkeep			400
Drains upkeep			200
Buildings, permanent, clerihew, engines, etc			5,000
Gathering, curing and dispatch of 600 cwt. cacao at R4			2,400
Contingencies			900
Superintendence and allowances ...	3,500		
Conductor	500		
		4,000	
			R15,700

5TH YEAR from 1st July to 30th June.

Weeding at R1			R2,400
Pruning and suckering			400
Roads upkeep			400
Drains upkeep			250
Gathering, curing and dispatch of 1,000 cwt. cacao at R3·50			3,500
Building upkeep			200
Contingencies			900
Superintendence and allowances ...	3,500		
Conductor	500		
		4,000	
			R12,050

Interest on Expenditure.

5 years' interest on cost of land at R8 per cent on		R5,000	R2,000

CACAO.—(*continued.*)

5 years' interest on 1st year's expenditure at R8 per cent on	18,800	7,520
4 years' interest on 2nd year's expenditure at R8 per cent on	10,750	3,440
3 years' interest on 3rd year's expenditure at R8 per cent on	10,250	2,460
2 years' interest on 4th year's expenditure at R8 per cent on	15,700	2,512
1 year's interest on 5th year's expenditure at R8 per cent on	12,050	964
	R72,550	R18,896
Add interest	18,896	
Expenditure for 5 years ...	R91,446	
Less 1,800 cwt. cacao sold at R45	81,000	
Debt on estate at end of 5th year	R10,446	
Add for purchase of other 50 acres at R25...	1,250	
	R11,696	
The expenditure each year after this, allowing R3,000 for manuring would be about		16,500
Against which put proceeds of sale of 1,000 cwt. cacao at R45		45,000
Year's profit		R28,500
Value of estate at 5 years old with only 5 cwt. per acre—this is at the rate of 5 years' purchase— ...	R140,000	

CARDAMOMS.

(*From "Notes on Cardamom Cultivation" by T. C. Owen.**)

Estimate of expenditure and returns on 25 acres of cardamoms, managed from an adjoining estate:—

1st Year.	R.	R.
Value of land at R100 per acre	2,500	
Clearing undergrowth and 1st weeding at R15	375	
Lining, holing, planting and supplying at R20	500	
Superintendence	500	
Cost of 37,500 good double bulbs, allowing 50 per cent for supplies, at R30 per 1000	1,125	
Tools, &c.	100	
Roads and weeding	200	
Cost at end of *1st year* (*plants 1 year old*) ...		5,300

* Published by A. M. & J. Ferguson, Colombo.

2ND YEAR.	R	R
Supplying and cost of bulbs	200	
Weeding	125	
Superintendence	500	
Contingencies	100	
		925
Cost at end of *2nd year* (*plants 2 years old*) ...		R6,225
3RD YEAR.		
Expenditure 3rd year as before - - ...		925
Cost at end of *3rd year* (*plants 3 years old*) ...		R7,150
4TH YEAR.		
Superintendence and contingencies -	600	
Erection of curing house, including cost of scissors, &c. - - - -	1,000	
Picking, curing, clipping, packing and transporting 3750 lb. dry fruit at 40 cents per lb.	1,500	3,100
Cost at end of *4th year* (*plants 4 years old*) ...		R10,250
Receipts 3250 lb. at R2 ... ... R6,500		
500 lb. split at R0·75 ... R375		6,875
		R3,375
5TH YEAR.		
Superintendence and contingencies ...	600	
Pruning and clearing stools	100	
Picking, &c., as before 6250 lb. at 40 cents	2,500	3,200
Cost at end of *5th year* (*plants 5 years old*) ...		R6,575
Receipts 5400 lb. at R2 ... ... R10,800		
850 lb. split at R0·75 ... R637 ...		11,437
Profit ...		R4,862

NOTES ON ESTIMATE.

1st Year.—The allowance of 50 per cent supplies may seem large, but it is very likely to be required when the bulbs have to be carried far. If seedlings are employed the cost would be much lessened, but a year would be lost. The other items need no comment.

2nd Year.—Supplying allows for the failure of 25 per cent of the first year's planting. Weeding will be necessary this year, but is very inexpensive under forest shade, if the forest clearing has been effective.

3rd Year.—The same expenditure is allowed for the 3rd as for the 2nd year, and should suffice for putting ravines into order and clearing jungle edges, as the actual weeding would be almost nil.

4th Year.—The R1,000 allowed for a curing house should allow ample margin for all expenses of erecting a special building for the purpose, in most cases a large portion of this outlay can be saved by the adaptation of some existing building to the purpose. No crop is estimated for before this year. At low elevations there would be a maiden crop in the third year, and there would certainly be some crop then higher up, but this has been left out of the calculation, as its amount is uncertain, and dependent on a greater degree of success at the outset than is usual in card-amom clearings. The estimated amount per acre, 150 lb., is what may be expected in suitable localities, and under fairly favourable circumstances (cardamoms should not be planted otherwise), and is the outcome of actual experience. The proportion of split fruit will generally, during a whole season, amount to from ten to fifteen per cent of the crop, depending entirely on the amount of care taken with the picking and curing; the allowance here made is very high, and certainly should not be exceeded under any circumstances. The cost of picking and curing, 40 cents, allows a good margin for all expenses from the time the fruit is picked to its delivery in Colombo. The present rate at which split cardamoms sell varies from one rupee to a rupee and a half, according to quality; at recent prices, 3 lb. well cured fruit may be calculated to *nett* one pound sterling. The course of the market is no doubt very uncertain, and if production were to increase to any great extent it would soon be glutted and prices fall considerably.

5th Year.—250 lb. per acre is the estimated crop in the fifth year: this is below the actual results of my experience, and 300 lb. might be safely relied on *in favourable localities.* After the fifth year there will probably be a falling-off in the yield, or, at any rate, there will be no increase, for the first full crop appears generally to be the best. *Cultivation*, in the form of careful attention to clearing out and pruning, now becomes necessary.

From this year too the sample of fruit will become very much smaller, and hence the cost of picking, &c., will probably rise to nearly 50 cents per lb. A considerable profit may fairly be looked for annually, but the rate of production during the early crops must not be expected to continue. As before stated, also the effect of prolonged and abnormal wet weather is most disastrous and disappointing.

CINCHONA.

(*From "Cinchona Planters' Manual" by T. C. Owen.**)

I will now tabulate the results of the preceding estimates, rejecting fractions, and show the annual expenses and returns per acre in each case.

Date.	*Officinalis.*				*Succirubra.*			
	Uprooting.		Mossing and Renewing.		Coppicing.		Mossing and Renewing.	
	Expenses per acre.	Returns per acre.	Expenses per acre.	Returns per acre.	Expenses per acre.	Returns per acre.	Expenses per acre.	Returns per acre.
To March 1880...	R. 279	R.	R. 279	R.	R. 196	R.	R. 196	R.
1880-81	31		31		27		27	
1881-82	36		31		29		27	
1882-83	36		31		29		27	
1883-84	78		84		29		27	
		544		360				
	108		72					
1884-85	78		110		84		101	
		544		541		358		358
	108		108		71		71	
1885-86	138		84		110		101	
		1,435		721		538		358
	287		144		107		71	
1886-87			199		120		101	
				2,165		957		717
				1,082	191		143	
			649					
1887							903	2,871
	1,179		1,822		993		1,795	
Profit per acre†	1,344		3,047		860		2,509	
	R2,523	2,523	4,869	4,869	1,853	1,853	4,304	4,304

* Published by A. M. & J. Ferguson, Colombo, in 1881.

†Prices of bark have fallen since these estimates were made up; and much more has been learned of the uncertainty attending Cinchona Cultivation in the East: see *Tropical Agriculturist*; but there is still a margin for satisfactory profits where care is taken to plant and cultivate according to the experience gained.

COCONUT PALMS.

Estimated cost of planting and cultivating 100 *acres of Coconuts for* 10 *years in the Western Province of Ceylon.*

Year.		R.	R.
I.—100 acres land at R10 and Government charges ...	...	1,500	
Felling, Clearing, and Fencing	...	1,000	
Holes $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$ 7,500 @ 04	...	300	
Planting	...	40	
Ditches, etc.	...	200	
Nursery: 10,000 nuts at R30...	...	300	
Tools and Sundries	...	50	
			430
VII.—Weeding	...	250	
Repairs and Tools	...	20	
Kangany	...	150	
			420
VIII.—Weeding	...	200	
Kangany	...	150	
			350
IX.—Weeding	...	200	
Kangany	...	150	
			350
X.—Weeding	...	200	
Inspection and Sundries, 10 years	...	210	
Kangany	...	150	
			560
Carry on...			R8,200

Note by Mr. T. C. Owen in a letter to Compiler, dated 26th Feb. 1885:—

"CINCHONA ESTIMATES of returns are rather upset by the fact that *as a rule* Cinchona cannot be grown either in new or old land now. The plants do not thrive as they used to, and apparently the stock is deteriorated.* Shaving two or more times and then coppicing, even at present low prices would shew a handsome profit to those *who have the trees*, but for those that haven't, I question the advisability of any planting on a large scale. If successful, however, the future profit would undoubtedly be large owing to decreased production."

* This may mean that fresh seed from South America is required.

	R.
Amount over ...	8,200
Interest—Nine years at 7 per cent ...	4,700
	R12,900

Note 1.—If given out to Goveyas (native cultivators) there will be a saving of about R2,900, which will leave the nett cost of estate R10,000.

Note 2.—Crop to the value of R200 or so may be expected between close of 8th and 10th years.

Note 3.—At close of 15th year should yield from R2,000 to R2,500; at close of 20th year should yield from R3,500 to R4,000.

Note 4.—Value at close of 10th year R20,000.
Do. do. 15th do. R30,000.
Do. do. 20th do. R50,000.

Note 5.—Above calculations made on the supposition that the soil and climate are first-class.

ARECA PALM.

(*Notes by a Ceylon Planter.**)

The trees admit of close planting—6′ × 6′ (or—as I should prefer them—12′ × 3′; and perhaps better still, in *double-rowed* avenues of 21′ × 3′ × 3′)—or say 1,200 trees per acre, not being at all too close. It takes on an average 12,000 cured nuts to one cwt. At 300 per tree, the yield per acre (of 1,200 trees) per annum would thus be 30 cwt., and as far as can be made out this is not at all too high an average yield to calculate on. The local wholesale value at Galle on Colombo is usually about R8 per cwt.—or, at 30 cwt., R240 per acre, equal to a nett profit of say R140—as R100 may be considered a liberal expenditure. In Madras and Bombay about R15 per cwt. is generally realized for consignments from here: it may therefore pay better to ship. And of course if the more valuable kinds are grown the profits will be still further greatly enhanced—probably more than doubled. Uses, and perhaps a good market, may hereafter be found for the fibre? The industry not having as yet been put to the test on a large scale, I may be overrating it, but don't think so; and it would at least be interesting to have the opinion of some of your native correspondents. If not, with *practically* an unlimited demand, *hundreds of millions* of people in China, India, &c., using arecanuts, it ranks second to few other enterprizes, and offers at the same time a safe investment for limited capital.

* From *Tropical Agriculturist* for April 1883.

CEYLON CURRENCY.

☞ It may be well to explain for the benefit of English readers that the Ceylon Currency is in silver Rupees and Cents of a Rupee, and that the latter fluctuates in value according to exchange, between 1s. 6d. and 1s. 8d., the rate at present being about 1s. 7d.

Arecas.—Mr. A. G. K. Borron has published a valuable letter on the cultivation of the Arecanut palm (see *Tropical Agriculturist* for April 1885), shewing that a gross return of 1287 per acre may be expected after six years, or about B6) per acre per annum *nett*. Mr. Borron has had practical experience from about 40 acres in bearing and his more moderate estimate is more reliable than that on page 76, though it is but right to say that the latter was drawn up in a very different and perhaps richer part of the country with a more genial climate than Mr. Borron's district possesses.

CEYLON (ILLUSTRATED).

BY J. FERGUSON.

Being Second Edition, Entitled

"CEYLON IN 1884."

Altogether 18 ENGRAVINGS (finely executed) and a coloured AGRICULTURAL MAP of the island.

PUBLISHED BY SAMPSON LOW & Co.

WITH three additional Engravings, namely, of the TEA and CACAO trees as grown in Ceylon; and of Ceylon CACAO PODS. The work also contains the latest trade and other Statistics; with a number of press corrections on the first edition; an enlargement of the appendix, and an explanation of the Map.

PRICE :—Credit R6; cash R5; by inland post. to England and all Postal Union Countries R6·66.

A few copies very handsomely bound in Morocco for Prize, Presentation or Gift purposes can be had:—

In full Morocco; price R14·00 each.

In medium " " R10·00 "

Also to be had of Messrs. CAVE & Co., Colombo, or from London Agents.

Tea, Coffee, Cinchona, &c. Cultivation.

A FEW copies in pamphlet form, corrected, of the following are on hand:—

(1.) MR. JARDINE on CACAO CULTIVATION with Estimates.

(2.) MR. OWEN on Tea and Cinchona, with Coffee, Cinchona, Cardamoms, &c.

(3.) MR. HAY'S LETTER on Pruning Tea and his Estimates, and THE DIMBULA P. A. on Coffee Manuring and Pruning and on Cinchona Bark Harvesting, in one.

[(4.) Copy of the "Tropical Agriculturist" with Mr. Armstrong's and Mr. Owen's papers on Tea, &c.—R1.]

(5.) Mr. Hay's Interview with the Dimbula Planters' Association on Tea, &c.

27 cents each pamphlet with postage; the set of 4 post-free for 75 cents; or with the above T. A. R1·50.

"Ceylon Observer" Office, 9th November 1883.

BOOKS OF WHICH EVERY TROPICAL PLANTER OUGHT TO HAVE A COPY.

(*Supplied at "Ceylon Observer" Office, or by our Agents.*)

	R.	c.
Tropical Agriculturist, 1st Volume, 1881-2, with Index, 1088 pages	13	00
Do do. 2nd Volume, 1882-3, with Index, 1008 pages	13	00
Do. 3rd Volume 1883-4, with Index 1014 pages, including the August Extra number with Report on Forests and Map	13	00
Do. 4th Volume (Current Subscription)	10	00
The Coffee Tree and its Enemies, by Nietner (2nd Edition, revised by Mr. S. Green) ...	1	52
Coffee Planter's Manual, by Alex. Brown, with special additions by A. M. & J. Ferguson and others	3	08
Coffee Grub, with Illustrations	1	54
Tea Cultivation in Ceylon, by C. S. Armstrong (revised) 1884	0	54
Tea Cultivation in Assam, by H. Cottam	1	52
Brazil as a Coffee-growing Country ...	1	54
Cocoa as Grown in Trinidad and how to Plant in Ceylon with W. Jardine's Ceylon Essay and Estimates	1	70
Cinchona Planter's Manual, by Owen ...	4	10
Cinchona Cultivation (Prize Essay) T. N. Christie	1	27
Liberian Coffee: its History and Cultivation, with beautiful Coloured Drawings ...	5	18
Indiarubber and Gutta Percha, Pamphlet on	2	08
Cardamoms—Notes on Cultivation (Owen) ...	1	27
First Year's Work on a Coffee Plantation, by A. L. Cross	1	02
On the Manuring of Estates, by Edward S. Grigson	1	02
Mr. Hughes' Analyses, First and Second Series Manures and Limestone ...	0	26
Ceylon Coffee Soil and Manures, by Hughes	1	54
Sibson's Agricultural Chemistry	1	75
Coffee Planting in Southern India and Ceylon by E. C. P. Hull	5	66
Book-keeping for Planters, a system of Accounts (by "Double Entry") adapted to the requirments of Coffee Planters	1	79

	R.	c.
Gardening (Flower and Kitchen), and Ornamental Trees	1	02
The Ceylon Labour Ordinance—Copies of the Ordinance No. 11 of 1865	0	40
Liability of Estate Owners and Superintendents	2	02
Fifteen Hundred Conversational Sentences in Tamil, with English Translation ...	2	56
"Inge Vā!" or the Sinna Durai's Pocket Tamil Guide. [Greatly enlarged, 170 pages.] By A. M. Ferguson, jr.	2	54

(These are cash prices and include local postage.)

Post Office Orders from India or elsewhere for above amounts will secure the books ordered and paid for.

☞ All our Ceylon Books are to be obtained of JOHN HADDON & Co., 3 Bouverie Street, Fleet Street and WHITTINGHAM & Co., Gracechurch Street, E. C.

NEW MAP OF CEYLON.

IN case and Mounted on Rollers, as prepared for Ferguson's "Ceylon in 1884, Illustrated."

	Credit.	Cash.
Price of the former (in ase)	R3·50	R3·25
postage 8c.		
Do. on Rollers	3·75	3·50
postage 8c.		

Also to be had at Messrs. H. W. & A. W. Cave, Colombo.

MAP OF THE CEYLON COFFEE DISTRICTS.

	Uncoloured.	*Coloured.*
On Thin Paper	4·50	R5·00
Postage 4 Cents.		
On Thick Paper	5·00	5·50
Postage 4 Cents.		
Bound in ase to fold up ...	8·00	9·50
Postage 10 Cents.		

[Ten per cent off for cash accompanying order; fifteen per cent where three or more copies are ordered and paid for.]

[The Map is of the same size as that of Ceylon published at this Office, namely, 32 × 24 inches.]

ALL ABOUT GRUB;

INCLUDING A PAPER ON THE GRUB PEST IN CEYLON.

BEING THE RESULT OF OBSERVATIONS ON THE

COCKCHAFERS AND THEIR LARVÆ

IN CONNECTION WITH COFFEE AND OTHER PLANTING,

BY

R. C. HALDANE.

COLOMBO: A. M. & J. FERGUSON.

PRICE:—With uncoloured plates: R1·50 and R2 postage 4c. Without plates: R1·25 cash, credit R1·7 postage 4c.

CONTENTS.

	PAGE.
The Grub Pest in Ceylon	9
Cause of Grub	9
Soil	10
Time of Attack	11
Age of Grub	12
Prevention...	12
Remedies	14
Uses of Grub	16
Varieties of Beetles	17
Big Patana Cockchafer	17
Maskeliya Cockchafer	18
Yellow-Bellied Cockchafer... ...	19
Small Cockahafer	20
Uva Cockchafer	20
Specked Beetle	20
Bronze Beetle...	21
Experiments	21
APPENDIX.	
Authorities on Grub, quoted	23-28
Coffee Grub and Patanas	28-29
Extracts from "Encyclopædia Britannica," on Cockchafers	29-30
Remarks on Mr. Haldane's Essay from another planting observer	30

A CONCISE ESSAY ON THE MEDICAL TREATMENT OF MALABAR COOLIES, employed on the Coffee Estates of Ceylon and India. By Dr. Thwaites, M.D., M.R.I.. *Third Edition*. Cash R2·75, credit R3; postage 4c.

NOTES
ON
CARDAMOM CULTIVATION:
BY
T. C. OWEN.
WITH
AN ESTIMATE OF EXPENDITURE
AND
RETURN FOR 25 ACRES
AND
NOTES ON THE ESTIMATE.

Colombo:
A. M. & J. FERGUSON.

1883.

CONTENTS.

	PAGE.
Statistics	1
Indian methods	1
Descriptions of cardamoms	5
Soil	5
Shade, elevation, shelter, aspect, clearing ...	6
Drains, roads, weeding	7
Lining, holing, planting	9
Nurseries	10
Crop	11
Curing, drying-house	13
Pruning, manuring, enemies	15
Estimate, notes	16

PRICE.—Credit R1·50; Cash **R1·25; postage 2c**

COCOA AS GROWN IN TRINIDAD, and how to Plant it in Ceylon. With Four Pages of Illustrations. By a Ceylon Planter. (With Mr. Jardine's letter on Cacao Cultivation in Ceylon and Estimates as a Supplement.) Price: Credit R1·75, cash R1·50; postage 4c.

☞ Reduced Price for remaining Copies of this Edition R7·50—post paid—Cash with Order, R6·50.

FERGUSON'S
CEYLON
HANDBOOK AND DIRECTORY,

A COMPENDIUM OF USEFUL INFORMATION
TO WHICH IS PREFIXED A REVIEW OF THE
Planting Enterprize and Agriculture of the Colony,
WITH STATISTICAL INFORMATION
REFERRING TO THE PLANTING ENTERPRIZE IN OTHER COUNTRIES.
"Ceylon Observer" Office, November 1st, 1884.

☞ For the new "HANDBOOK AND DIRECTORY FOR 1885" now in the Press, orders will be booked at R8 per copy—postage extra.

"INGĒ VĀ!"

OR THE

SINNA DURAI'S POCKET TAMIL GUIDE.

[Greatly enlarged, 170 pages, or more than double the size of first edition, with a variety of useful information and a full vocabulary.]

BY

A. M. FERGUSON, JR.,

OF ABBOTSFORD ESTATE, LINDULA.

"CEYLON OBSERVER" PRESS.

Price:—Bound in flexible cloth cover, R3; cash R2·50 postage 4c. Strongly bound in cloth with gilt title, R3·75 and R3·25.

A planter, in ordering a copy of the new edition of this little book, says:—"I think it the most practical book of the kind I have ever seen, and as invaluable to sinna durais as it is to those more advanced in Tamil. In it is to be found many a sentence and word that older hands have used substitutes for until 'Ingē Vā!' came to their rescue."

A visiting agent writes:—"A copy of it should be in the hands of *every* assistant, and there are few managers who would not find great benefit from the study of it. The plan of the work is, I think, the best that could have been adopted."

Dr. R. Rost, Head Librarian, India Office, describes the work as "an excellent book," and adds:—"There is a vast deal of useful information in it (as *e. g.* the meanings of names of places) not usually found in such books."